

FREE POSTER!

SPONSORED BY **BLACKSTONE LABS**

MB MUSCULAR DEVELOPMENT

**BUILD THE
CLASSIC
PHYSIQUE**

**DELTS
BACK
ARMS
LEGS**

**THE
MAX
MUSCLE
PLAN!**

**PACK
ON 15 LBS
OF MASS!**

**YOUR #1
SOURCE FOR
BODYBUILDING
SCIENCE**
See page 140

20 YEAR
OLD
CODY

**MUSCLES WAY
TO VICTORY!** **THE
NEXT BIG
THING!**
▶ PLUS! GET JACKED & RIPPED IN 30 DAYS!

MUSCULARDEVELOPMENT.COM

\$6.99US



0 74808 03275 4

11>
NOVEMBER 2015



Lipodrene®

DIETARY SUPPLEMENT



**THE WORLD'S MOST ADVANCED WEIGHT LOSS AID
EVER DEVELOPED WITH RAPID RELEASE TECHNOLOGY!†**
Revolutionary Diet Aid for Energy and Weight Loss!†

- Over 1 Billion Dosages Sold and #1 Ephedra Product Available!†
- Hardcore Stimulants for an Eye-Opening Blast of Energy,
Including 25mg Ephedra Extract & 1,3 Dimethylamylamine (DMAA)†



**25MG
EPHEDRA
EXTRACT**

www.hitechpharma.com • For more information, please call 1.888.855.7919.

†These statements have not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, diagnose, or prevent any disease. This product should not be used in place of or as a substitute for recommendations by your healthcare professional. No clinical study has been performed on Lipodrene® Hardcore. These statements are based upon the active ingredients: Ephedra Extract, Acacia Rigidula, Theobromine, Yohimbe, Citrus aurantium, Caffeine, Green tea, 1,3 Dimethylamine HCl, 5-methoxytryptamine and Phenylethylamine. WARNING: this product can raise your blood pressure and interfere with other drugs you may be taking. Talk to your doctor about this product.

Dietary Supplement

Black Widow®

Xtreme Energizer!†



Black Widow® is the newest stimulant product from Hi-Tech Pharmaceuticals (the leader in diet and energy pills). Black Widow™ contains **25mg Thermo-Z™** brand ephedra extract and is designed for extreme energy for hardcore stimulant fans.

Black Widow® will set you on fire from the moment you take it, and will be all over you for hours! The "ECA" stack of the 90s is combined with Thermo-RX® (often called the ephedrine imposter) from Acacia rigidula. Black Widow® contains Thermo-Z™ brand ephedra (not banned in any state or by the FDA). If you want a good "kick in the ass" and want to feel great all day, then Black Widow® will not disappoint you. Black Widow® provides wicked energy and will have you coming back for more.

25mg
Extra Strength
Ephedra Extract



www.hitechpharma.com • For more information, please call 1.888.855.7919.

†These statements have not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, diagnose, or prevent any disease. This product should not be used in place of or as a substitute for recommendations by your healthcare professional. No clinical study has been performed on Black Widow®. These statements specifically are based upon the active ingredients: Ephedra, Caffeine, Acacia rigidula, Theobromine, and Yohimbe. **WARNING:** this product can raise blood pressure and interfere with other drugs you may be taking. Talk to your doctor about this product.

FEEL THE POWER OF PURE BEEF PROTEIN

Raptor-HP - an all new High-Performance "Super-Protein" designed to enhance physical performance, increase muscle growth and strength, and enhance recovery.

For centuries the number one protein source for athletes has been beef - red meat. Beef imparts almost mythical effects on building lean muscle tissue and muscle strength. However, the biggest negative with beef has always been the unwanted things that come along with it. Namely excessive calories, fat, and cholesterol. Even with all the baggage that conventional beef consumption brings, the world's most successful athletes still eat massive quantities of red meat day in and day out.

Raptor-HP Changes The Game.

New Raptor-HP gives you all the good and incredible muscle-building and strength generating qualities of red meat and none of the bad.

Raptor HP is Made From Pure Beef/Red Meat Protein.

Raptor-HP is a complete high-performance protein derived from all-natural beef raw material with no added hormones and is GMO free. No dairy, no soy - pure 100% premium beef protein.

The actual peptide component in Raptor-HP is greater than 97% protein. This is far higher than other proteins and yes more than whey isolate.

New and innovative protein technology have allowed us to isolate an ultra-high, extremely efficient (muscle-building) peptide profile from beef into a highly concentrated, high-performance "Super-Protein".

Raptor-HP is High-Pressure Hydrolyzed

Raptor-HP is hydrolyzed using an innovative chemical and enzyme free

High-Pressure Hydrolyzation (HPH) technique.

This is a new technique that allows precision molecular weight peptides to be cleaved from the intact protein giving the ability to engineer specific peptide weights within the protein composition.

Molecular weights of these peptides are measured in Daltons (Da). Raptor HP's molecular weight profile 15% - 6,000 Da, 55% - 3,000 Da, and 30% - 500 Da and smaller. The smaller the molecular weight of the peptide the faster it's absorbed into muscle tissue.

This gives Raptor-HP a Tri-Phase Peptide (TPP) for engineered absorption dynamics (EAD).

30% of the peptides are ultra-low molecular weight peptides and get absorbed extremely fast for immediate return to positive nitrogen balance and an immediate effect of protein synthesis for muscle repair right after training.

55% of the peptides have a 6X greater molecular weight for intermediate absorption dynamics. This supports the anabolic growth phase that occurs a couple of hours after training.

15% of the peptides have a 10X greater molecular weight and are slowly released for extended anabolic support and recovery several hours later.

Raptor-HP - 3 Dimensional Protein

Raptor-HP is a 3-Dimensional protein giving you fast, intermediate, and extended protein absorption rates.

Your muscles get a **rush of fast acting** protein right when you **drink Raptor-HP**. Instant muscle repair after training.

You then get an **intermediate** flood of peptides to your muscles as you enter the anabolic growth phase after your workout.

Raptor-HP is not finished yet - finally you get extended anabolic effects as slow released peptides enter your muscles for prolonged enhanced recovery and growth.

Raptor-HP is Enhanced with Creatine

Raptor-HP is also enhanced with creatine for the enormous research proven benefits creatine imparts. This creatine enhancement is synergistic with beef as red meat contains a high concentration of naturally occurring creatine. More so than any other food source.

Even with beef's naturally high creatine content, adding additional creatine brings each serving to the research proven dose quantities shown in clinical studies to build muscle and strength.

The Muscle-Building Power of Beef

Raptor HP gives

athletes the muscle-building power of red meat plus engineered peptide technology without any of the bad aspects of red meat.

Raptor-HP All The Good Without The Bad.

Tri-Phase absorption dynamics - fast, medium, and slow absorbing protein peptides.

Super low in fat. Virtually no cholesterol. Very low in calories.

Raptor-HP Tastes Like a Dessert.

Raptor tastes better than any other protein available. It's rich and creamy with absolutely no indications of beef whatsoever. You get the power of red meat, pure beef, with the taste of a dark chocolate gourmet milkshake.

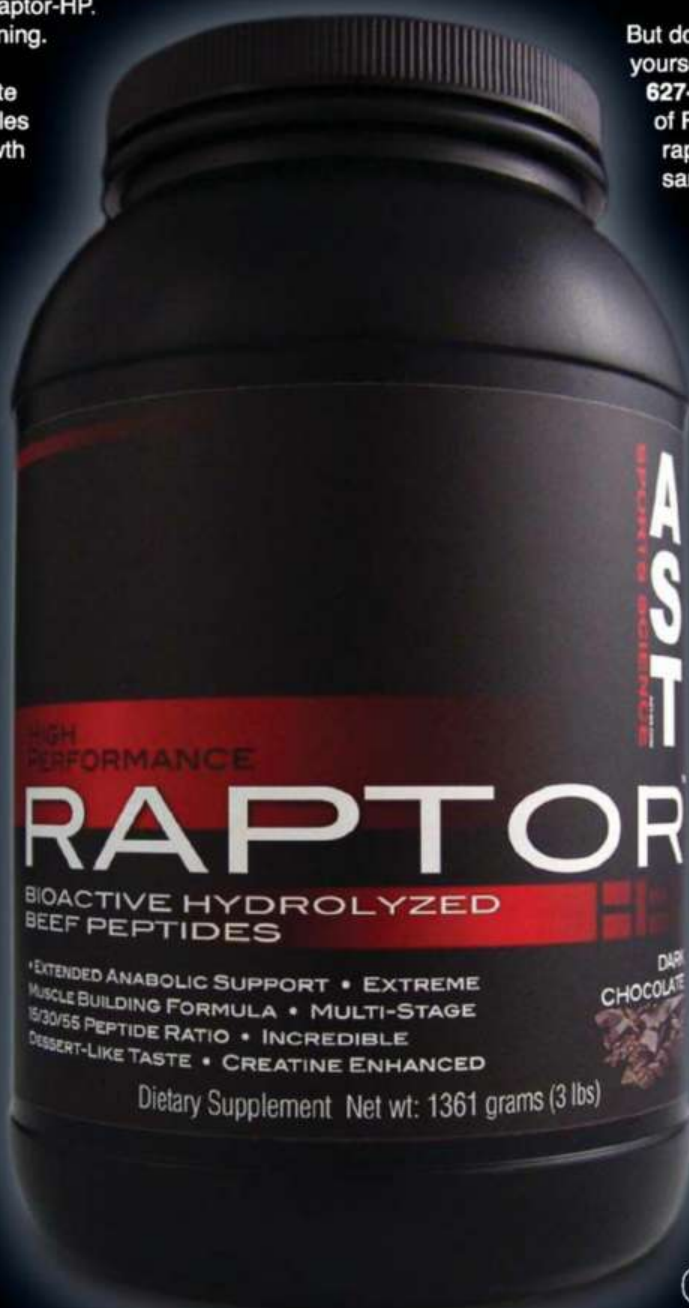
One scoop in 8 to 12 ounces of cold water or milk gives you a dessert-like shake with 24 grams of powerful, pure beef protein peptides.

The taste is incredible.

The texture and mouthfeel are creamy.

The muscle-building effects are fast and powerful.

But don't take my word for it. Try it for yourself absolutely free. Just call **1-800-627-2788** and ask for you free sample of Raptor-HP. Or go online to www.raptorhp.com and we'll get a free sample right out to you.



**Call For Your
FREE Sample!
1-800-627-2788**

AST
SPORTS SCIENCE
AST-SS.COM

THE SCIENCE OF
STRONG
AST SPORTS SCIENCE



GNC  theVitamin Shoppe

 BODY BUILDING ESSENTIALS

amazon.com

TRUE STRENGTH
WWW.OPTIMUMNUTRITION.COM



USA (800) 705-5226 INTL (630) 236-0097



YOUR GOLD STANDARD FOR TRUE STRENGTH



After 10 consecutive years as Bodybuilding.com's Protein of the Year and Supplement of the Year, Gold Standard 100% Whey™ has no equal for post-workout whey protein. But there is an ideal Pre-Workout formula worthy of the Gold Standard name. Introducing Gold Standard Pre-Workout™. Packed with proven ingredients to support energy, focus and training endurance*, it's the perfect complement to the world's most popular whey protein shake. ON has set the Gold Standard for Casein and Naturally Flavored Whey protein, too. Don't settle for second place products. Get the legit products that are as GOOD AS GOLD!



These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

*When taken at the maximum dosage over time.

goBSN.com



Team BSN Athlete
Dallas McCarver
IFBB PROFESSIONAL BODYBUILDER



FINISH FIRST.®

Think big.

PUSH

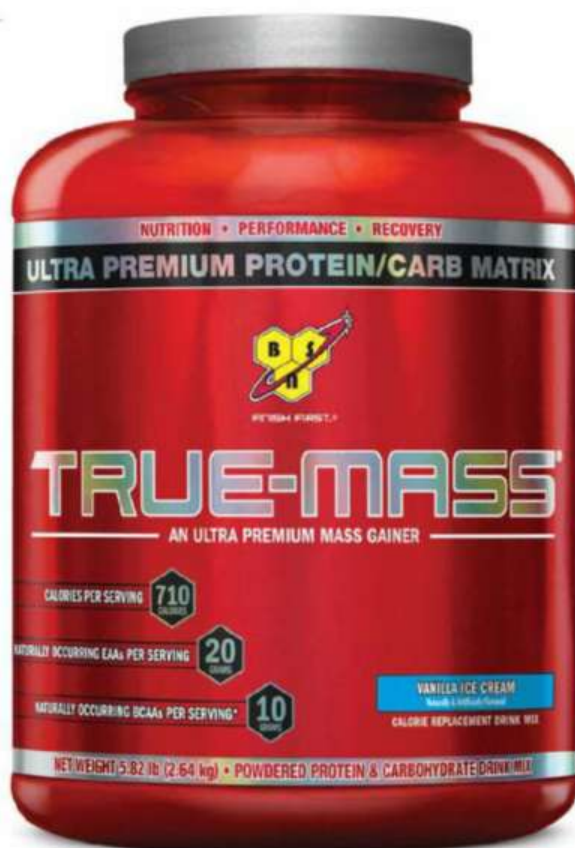
harder.

Because there's no such thing as too big.

It's bulking season. Time to stack up the plates, and pack on some serious size. TRUE-MASS® is scientifically engineered to support your lean muscle mass growth and recovery. BSN® has combined its legendary taste with a 2:1 ratio of workout-fueling carbohydrates and ultra premium quality proteins.

You push hard today, with TRUE-MASS®
you'll push harder tomorrow.

Visit goBSN.com to find your push.



MASS GAIN



RECOVERY



HIGH CALORIE*

GNC

the Vitamin Shopper

BSN

amazon.com

TRM-DM2 ©2015 BSN® For best results supplements should be taken as directed over time, at maximum dosage in conjunction with a healthy diet and regular exercise program. Results may vary. *Based on a 2000 calorie per day diet.

YOUR **BEST** TRAINING PARTNERS

PREWORKOUT POSTWORKOUT



COMPARE FOR YOURSELF

A Comparison of Active Ingredient Amounts in AML PreWorkout with 8 Top Competitors

	Caffeine Anhydrous	Citrulline Malate	Creatine Monohydrate	Betaine	Beta-Alanine
AMOUNTS PER SUGGESTED SERVING					
PREWORKOUT	400mg	6g	5g	2.5g	2g
COMPETITIVE BRAND #1	DU-PB	NONE	1g (as Creatine Nitrate)	DU-PB	1.6g
COMPETITIVE BRAND #2	DU-PB	NONE	DU-PB	DU-PB	NONE
COMPETITIVE BRAND #3	DU-PB	DU-PB	DU-PB	DU-PB	DU-PB
COMPETITIVE BRAND #4	175mg	1.5g	3g	NONE	1.5g
COMPETITIVE BRAND #5	DU-PB	NONE	NONE	NONE	NONE
COMPETITIVE BRAND #6	190mg	NONE	NONE	NONE	1.6g
COMPETITIVE BRAND #7	DU-PB	NONE	NONE	NONE	2g
COMPETITIVE BRAND #8	350mg	6g	2g (as Creatine HCl)	NONE	1.6g

DU-PB = Dosage Unavailable, Proprietary Blend
 = Highest Dosage

A Comparison of the Top 3 Proven Post-Workout Nutrients

	L-Leucine	Creatine Monohydrate	Betaine
AMOUNTS PER SUGGESTED SERVING			
POSTWORKOUT	4g	5g	2.5g
COMPETITIVE BRAND #1	DU-PB	NONE	NONE
COMPETITIVE BRAND #2	2.5g	NONE	NONE
COMPETITIVE BRAND #3	DU-PB	NONE	NONE
COMPETITIVE BRAND #4	DU-PB	NONE	NONE
COMPETITIVE BRAND #5	2.5g	NONE	NONE
COMPETITIVE BRAND #6	2g	NONE	1.25g
COMPETITIVE BRAND #7	DU-PB	NONE	NONE
COMPETITIVE BRAND #8	3.6g	2g (as Creatine HCl)	1.5g

SCIENCE > INNOVATION > RESULTS

WWW.ADVANCEDMOLECULARLABS.COM

LOOK FOR US AT



theVitamin Shoppe®
 every body matters™

Lucky Vitamin
 the Natural Way to Get the Most from Your Diet

NOW AVAILABLE IN STORES NATIONWIDE

THERMOHEAT[®]

"I WAS THE **FIRST** TO INTRODUCE AND BRING TO MARKET AN EPHEDRA/CAFFEINE STACK AT TWIN LAB, CALLED **RIPPED FUEL**. I PERSONALLY BELIEVE

THERMOHEAT
IS EVEN **BETTER** THAN MY **ORIGINAL RIPPED FUEL FORMULA**."

-STEVE BLECHMAN,
FOUNDER, ADVANCED MOLECULAR LABS



GREAT THINGS
COME TO
THOSE WHO
SWEAT
THERMOHEAT

ALSO AVAILABLE



THE
ORIGINAL
BROWN FAT (BAT)
ACTIVATOR[™]

THERMOHEAT[®] and
THERMOHEAT[®] NIGHTTIME
are best used as part of a
diet and exercise program.



theVitamin Shoppe[®]
every body matters[™]

GNC
LIVE WELL



LuckyVitamin
The Internet's First & Best for Nutrition and Wellness

Copyright © 2015
Advanced Molecular Labs.
All rights reserved.

*These Statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.

WWW.ADVANCEDMOLECULARLABS.COM



+PLUS SERIES™

+PLUS SERIES™ CARNITINE



THE THERMOGENIC,
PERFORMANCE BOOSTING
CARNITINE

The L-carnitine blend includes superior forms of L-carnitine that have been shown to promote brain function, recovery from exercise, an increase in muscle carnitine levels and a healthy cardiovascular system. Also includes Gamma butyrobetaine to support your body's own L-Carnitine production and Grains of Paradise to support thermogenesis.¹

+PLUS SERIES™ BCAA



4:1:1 RATIO OF INSTANTIZED
WATER SOLUBLE BCAA'S &
DELAYED RELEASE
LEUCINE

Features instantized BCAA's for greater water solubility. This means preventing your shaker cup from being full of foam which is a typical experience for most BCAA users. That foam unfortunately is filled with Leucine, the BCAA responsible for anabolic signaling and the most important in the chain. So if you're not drinking the foam, you're not getting the most out of your BCAA's. Also features Active TR™ Leucine for a delayed release that supports protein synthesis over time.¹

+PLUS SERIES™ GLUTAMINE



THE RAPID ABSORBING,
IMMUNE SYSTEM
DEFENDING & GLUTAMINE
RECOVERY FORMULA

A blend of different forms of Glutamine and Glutamine Peptide plus Vitamin C to promote recovery and immune system support. Stress on the body can also result in inadequate amounts of Alanine, which is also included. It is considered to be one of the most important of the amino acids along with Glutamine for actual amino acid metabolism. The formula also features Sustamine®: a unique dipeptide ingredient that combines the amino acids L-Alanine and L-Glutamine to help your body rehydrate, replenish and recover. Sustamine's® dipeptide structure is quickly and easily absorbed by the body.¹



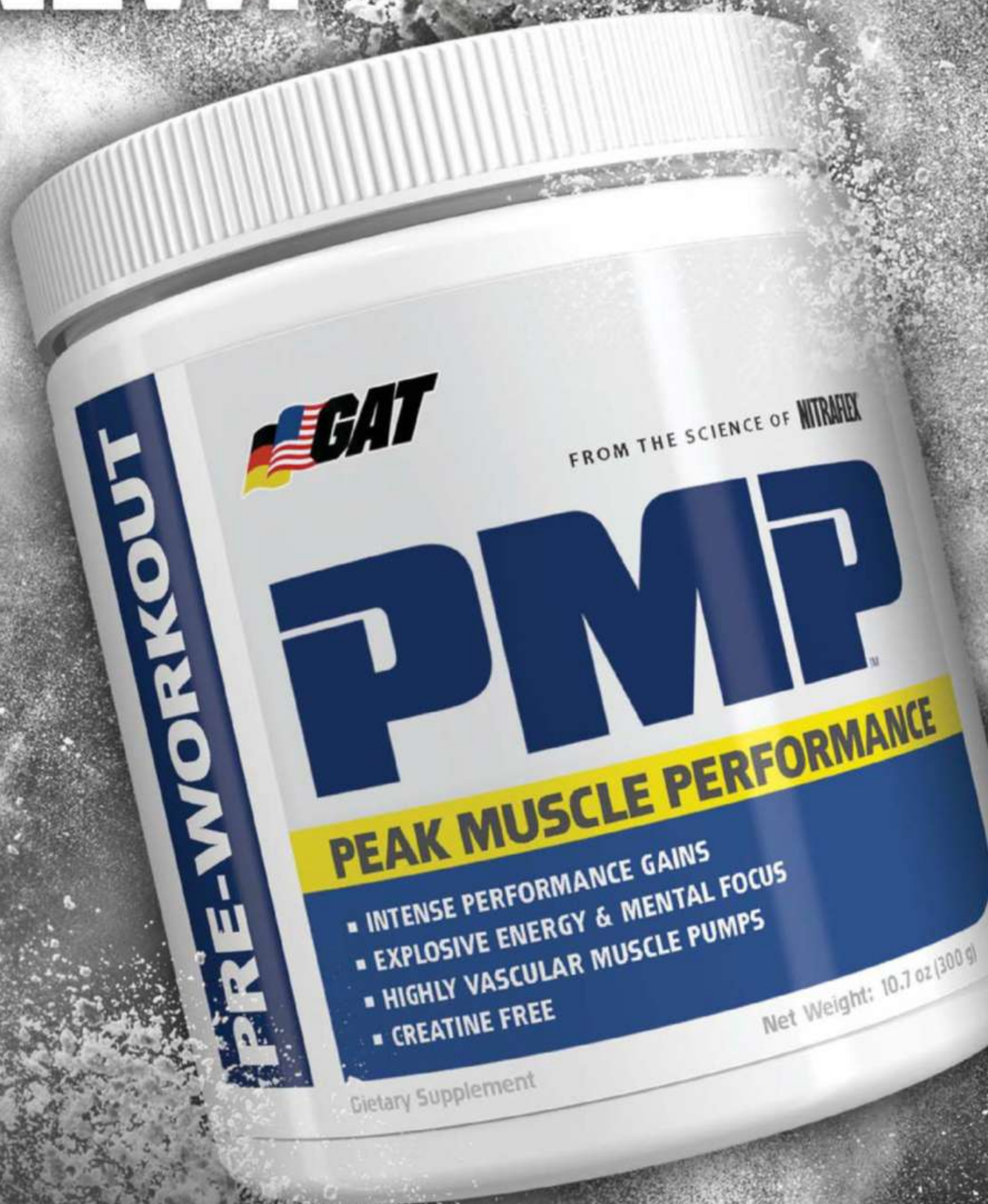
PROVEN INGREDIENTS
RE-IMAGINED



WWW.BETANCOURTNUTRITION.COM

*These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any disease.

NEW!



*Test statements based on studies by the GAT & GAT Administration.
The product is not intended to diagnose, treat, or prevent any disease.

FROM THE SCIENCE OF **NITRAFLEX®**

GAT REDEFINES PRE-TRAINING

GAT extreme performance is legendary.
Now, experience "tear-my-skin" pump effects,
intense energy and focus with our all-new PMP.
You will blast through training plateaus.
PMP doesn't just raise the pump pre-workout
bar. It explodes the bar to deliver spectacular
new peak muscle performance.

RASPBERRY
LEMONADE

MIXED
BERRY

ALSO AVAILABLE
STIMULANT-FREE

BLUE
RASPBERRY

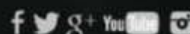
TeamGAT.com

"I stand firmly behind our
unconditional 30-day money-back
guarantee on all our products.
Stay strong!"

Charles Moser
Charles Moser
PRESIDENT & CEO



#COMPETE HARDER



CLINICALLY TESTED MUSCLE BUILDING BEEF PROTEIN

2 SCOOPS, 8 WEEKS 8 LBS. MUSCLE MASS*

The muscle building power of beef cannot be disputed. Ask most any bodybuilder and they will tell you that they make their biggest muscle gains and feel their strongest when they eat beef. Thanks to the development of CARNIVOR's advanced bioengineered Beef Protein Isolate (BPI), MuscleMeds has formulated a highly anabolic muscle building protein supplement that's shown in clinical research to build muscle mass and increase strength!

A new clinical study demonstrated that hard training athletes supplementing with CARNIVOR Beef Protein Isolate gained an average of 7.7 lbs. of muscle mass in just 8 weeks, while increasing strength. Researchers gave test subjects 2 scoops of CARNIVOR BPI daily for 8 weeks while they exercised 5 days weekly. Athletes taking CARNIVOR BPI added an impressive 6.4% average increase in lean body mass. In contrast, the placebo group did not significantly improve their muscle mass from baseline.*

The study also showed that CARNIVOR BPI supplementation significantly increased lifting strength. Test subjects increased their average bench press strength by over 45 lbs. and added more than 90 lbs. to their deadlift over baseline.* These impressive clinical findings clearly validate the muscle and strength building power of CARNIVOR Beef Protein Isolate.

NICK "3D" TRIGILI
IFBB PRO

THE POWER OF BEEF AT THE SPEED OF WHEY!

23g
PROTEIN

0g
FAT

0
CHOLESTEROL

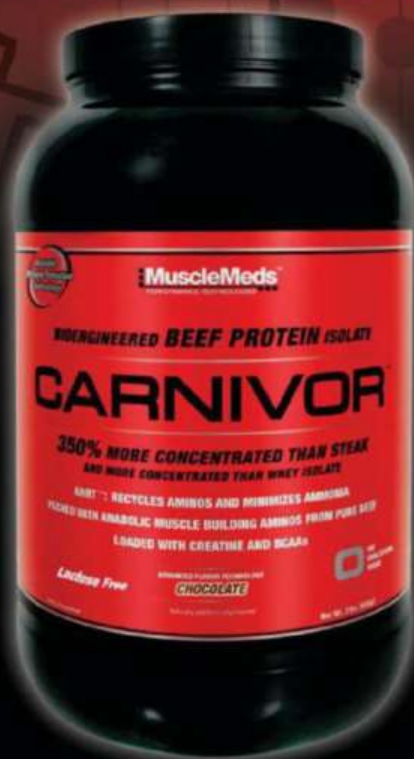
0
LACTOSE

0g
SUGAR

CARNIVOR is the world's first and #1 selling Beef Protein Isolate (BPI), delivering 23 grams of high quality pure beef protein in 10 delicious flavors. Thanks to advanced hydrolysis and isolation technologies, CARNIVOR is a 99% pure premium grade beef protein powder from USDA inspected beef that's highly bioavailable and loaded with performance enhancing BCAAs and creatine. CARNIVOR'S exclusive BPI not only digests as fast as whey protein isolate, but is even more concentrated in muscle building amino acids. And with CARNIVOR, you get all the power of 100% beef with 0 fat, 0 cholesterol, 0 sugar, 0 lactose and 0 gluten. CARNIVOR is fortified with creatine, BCAAs and BCKAs for even more muscle building power. Don't be fooled by the other poorly formulated beef protein imitators. BEEF UP your muscles and get the results you want with CARNIVOR!

Available in 10 delicious flavors!

- HYDROLYZED FOR FAST ABSORPTION
- 350% MORE CONCENTRATED THAN STEAK
- MORE CONCENTRATED THAN WHEY
- LOADED WITH CREATINE & BCAAs



New!

THE
#1 **WORLD'S**
SELLING
BEEF
PROTEIN



**NOW
AVAILABLE
IN NEW
RTD!**

THE POWER OF BEEF AT THE SPEED OF WHEY!

Enjoy the great taste and quality muscle building nutrition of CARNIVOR, the World's #1 Selling Beef Protein Isolate supplement, in a delicious ready-to-drink shake! High protein **CARNIVOR RTD** is the first protein shake of its kind to be made with USDA inspected beef protein. Its advanced hydrolysis technology provides 40 grams of muscle building protein per delicious serving with 0 fat, 0 cholesterol, 0 sugar, 0 lactose and 0 gluten. Plus, CARNIVOR RTDs are loaded with amino acids from high quality beef protein and fortified with branched chain amino acids (BCAAs). CARNIVOR RTD's are the only ready-to-drink shakes made with pure beef protein isolate. Using only USDA inspected beef that is non-GMO, rBST free and hormone free, CARNIVOR RTDs are hydrolyzed for super-fast absorption and more concentrated in amino acids than whey isolate. This advanced hydrolysis process yields a delicious, easy-to-digest and highly bioavailable concentrated pure beef protein isolate, while removing all the fat and cholesterol. Get the muscle building power of pure beef protein in a delicious and convenient shake with the all-new CARNIVOR RTD!

GNC
LIVE WELL



VITAMIN
WORLD

LUCKY
VITAMIN

theVitamin
Shopper

888.575.7067 • MuscleMedsRx.com

© 2015 MuscleMeds. All rights reserved. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, cure, treat or prevent any disease. Your results may vary.

*Sharp, et al., 2015 ISSN International Conference [Poster]. Muscle mass data based on male subjects. Lean body mass gains compared to baseline. Based on 2 scoops (46 grams protein) daily. Female subjects also experienced an increase in lean body mass.

MuscleMeds
PERFORMANCE TECHNOLOGIES



EDITOR'S LETTER

BY STEVE BLECHMAN, Publisher and Editor-in-Chief

CODY MONTGOMERY HIS TIME HAS COME



He is a humble, grateful young man who takes nothing for granted. As he tells MD this month: "My parents taught me you have to earn everything in life."

Cody Montgomery could be what bodybuilding has been waiting for. The industry is changing, and Cody is in the right place at the right time. Mass-monsters are not always going home with the winner's trophy anymore, and more streamlined physiques are increasingly being rewarded. With his amazing and aesthetic physique, his pleasing lines and fullness, Cody has already made bodybuilding history, at age 21. He's the first-ever three-time NPC Teenage Nationals Champion, a feat that will probably never be equaled, and he was also the 2014 Collegiate National Champion. Cody Montgomery is a phenomenon, and the best young bodybuilder ever—with a perfect seven contests, seven wins being his career record. But there is much more to Cody Montgomery than meets the eye.

Cody Montgomery has mental strength and a mindset that sets him apart from his peers. He is a role model for the next generation of competitors, in that he combines bodybuilding with pursuing a first-class education. And he is a humble, grateful young man who takes nothing for granted. As he tells MD this month: "My parents taught me you have to earn everything in life."

In "Cody Montgomery: The Special One" on page 96, the legendary Peter McGough examines the drive and psyche of the best and most successful young bodybuilder ever. In his own words, Cody takes us through the paths and detours of his career that have made him a superstar. Cody tells MD where he came from, where he's going and how he nearly quit last year.

A classic physique is based closely on the same ideals as the sculptures of ancient Greece, and it's an ode to physical perfection. Everything is balanced and in proportion, from the bone structure to the individual muscle groups. The general shape you want is the "X-frame," which means wide up top and tapering down to a small waist and hips, with quads and hams flaring out. Ron Harris tells you how to achieve that look in "How to Build a Classic Physique" on page 104. A classic physique is well worth the extra effort, because it will stand apart from the masses of lifters who chase nothing but raw bulk.

Justin Compton has already built his deltoids up to a level of thickness and mass that puts them in the elite category of development seen only in a few other men in the upper echelons of the IFBB, namely Heath, Dennis Wolf, Big Ramy, Roelly Winklaar, Evan Centopani and Juan Morel. Shoulders like Justin's are a distinct advantage for anyone aiming to be recognized as the best bodybuilder in the world. Find out how Justin built those cannonballs in "Delts Straight Outta Compton! How Justin Compton Trains the Shoulders That Will Rule the Sport," on page 112.

The 212 division doesn't get as much publicity as the open, but the



condition of the 212 athletes is often better. And if there's one 212 pro most known for his insane wheels, it's New Jersey's Gaetano aka Guy Cisternino. Guy's legs are a strong point on a physique that's now proven to be one of the best in the division, with four pro wins and counting. Find out how this beast from the east trains them in "Best Legs in the 212 Division? Guy Cisternino Just Might Have Them!" on page 120.

There is another newer trend in bodybuilding, besides more streamlined physiques being rewarded over mass-monsters. Pro bodybuilders are competing less often. Dan Solomon looks at the situation in "Where Have the Superstars Gone? As Pro Contest Lineups Suffer From a Lack of Star Power, Insiders Are Wondering if the Current System Is Working," an MD Special Report on page 130.

Muscular Development is your number-one source for building muscle, and for the latest research and best science to enable you to train smart and effectively. Our team of physicians, industry experts and research scientists has these reports on improving performance this month:

- "Melatonin and Serotonin (5-HT) Enhance Weight Loss and Brown Fat" – Fat Attack, page 76
- "Miracle Powers of Capsaicin" – Nutrition Performance, page 80

- "Muscular Performance Benefits of Caffeine" – Supplement Performance, page 84
- "Turning Up the Heat? Or Cold? For Muscle Strength and Growth" – Muscle Growth Update, page 88
- "Is a Warm-up Necessary Before Lifting?" – The M.A.X. Muscle Plan, page 92
- "T Boosters: Comparing Pharmaceuticals to Supplements" – Testosterone, page 134
- "Why MD Is the #1 Source for Bodybuilding Science" – Bodybuilding Science, page 140

The rest of the book is packed to the binder as usual— making MD your one-stop, most authoritative source for optimizing muscular development with the latest cutting-edge research on training, nutrition, fat loss, performance-enhancing drugs, muscle growth and bodybuilding science— and exclusive information from the industry experts, insiders and bodybuilding legends who make it all happen. See you next month!

MUSCULAR DEVELOPMENT

PUBLISHER STEVE BLECHMAN
EDITOR-IN-CHIEF

SENIOR EDITOR PETER MCGOUGH
SENIOR ONLINE EDITOR

EXECUTIVE EDITOR ANGELA T. FRIZALONE

CHIEF FINANCIAL OFFICER DENISE GEHRING

CREATIVE DIRECTOR ALAN DITTRICH, JR.

MANAGING EDITOR ALAN GOLNICK

SENIOR ASSOCIATE EDITOR LISA STEUER

SENIOR WRITER RON HARRIS

ASSOCIATE ART DIRECTOR STEPHEN KOLBASUK

SENIOR FEATURES EDITOR DAN SOLOMON

MEDIA ASSOCIATES SHAWN RAY
BOB CICHERILLO

SENIOR SCIENCE EDITOR MICHAEL J. RUDOLPH, PH.D.

CONTRIBUTING EDITORS THOMAS FAHEY, ED.D.
DANIEL GWARTNEY, M.D.
VICTOR R. PRISK, M.D.

CONTRIBUTING PHOTOGRAPHERS JASON BREEZE
IAN SPANIER
MICHAEL NEVEUX
PER BERNAL
JIMMY CARUSO
DAN RAY

EDITOR-IN-CHIEF ADINA ZANOLLI
www.musculardevelopment.com

DIGITAL CREATIVE DIRECTOR/DESIGN CONSULTANT CHRIS HOBRECKER

CONTRIBUTING VIDEOGRAPHERS JORDAN BLECHMAN
NICK DEL TORO, ADAM SILVER

ILLUSTRATOR BILL HAMILTON

ADVERTISING

ADVERTISING DIRECTOR ANGELA T. FRIZALONE
(239) 495-6899

DIRECTOR OF NEW BUSINESS DEVELOPMENT TODD HUGHES
416-346-3456

CORPORATE OFFICE 800-653-1151
631-751-9696

CIRCULATION CONSULTANTS IRWIN BILLMAN
RALPH PERICELLI

TO ORDER A SUBSCRIPTION: 1-800-653-1151

CUSTOMER SERVICE & SUBSCRIPTION INQUIRIES (631) 751-9696
1-800-653-1151

Advanced Research Media, Inc. reserves the right to reject any advertising at its discretion.

Advertisements meet legislation within country of origin.

MUSCULAR DEVELOPMENT (ISSN 0047-8415) is published monthly by Advanced Research Media, 21 Bennetts Road, Suite 101, Setauket, NY 11733. Copyright© 2010 by Advanced Research Media. All rights reserved. Copyright under the Universal Copyright Convention and the International Copyright Convention. Copyright reserved under the Pan Am Copyright. Rate: \$49.97 per year (USA); \$79.97 per two years (USA); foreign: \$79.97 per year. Nothing appearing in MUSCULAR DEVELOPMENT may be reprinted, either wholly or in part, without the written consent of the publisher. Send editorial submissions to: MUSCULAR DEVELOPMENT, 21 Bennetts Road, Suite 101, Setauket, NY 11733. Stamped, self-addressed envelope must accompany all submissions, and no responsibility can be assumed for unsolicited submissions. All letters, photos, manuscripts, etc. sent to MUSCULAR DEVELOPMENT will be considered as intended for publication, and MUSCULAR DEVELOPMENT reserves the right to edit and/or comment. Periodical postage paid at Setauket, N.Y. 11733, and at Glasgow, KY 42414. Postmaster: Send address changes to MUSCULAR DEVELOPMENT, 21 Bennetts Road, Suite 101, Setauket, NY 11733-9704. Advertising Office Phone: (239) 495-6899. PRINTED IN USA



LEAN-EFX™

ENERGY-MOOD ENHANCER

**Transforming
yourself to look,
feel and live
healthier.**

LEAN-EFX™ is formulated to help lose weight and sculpt your body, producing a lean athletic build. **LEAN-EFX™** promotes increased energy, an elevated mood, and **LEAN-EFX™**'s product science will put you on the path to a happy, healthier life.†

LEAN-EFX™ is on the cutting edge of the next generation of advanced weight loss products. **LEAN-EFX™** embraces advanced nutritional science and nature for a product that not only works, but sets the bar considerably higher for other weight loss products. Combine the effects of **LEAN-EFX™** with a clean diet, and a little exercise; you won't be disappointed.†

Available at:



www.fnutrition.com • For more information, please call 1.888.839.7962

†These statements have not been evaluated by the food and drug administration. These products are not intended to diagnose, treat, cure, or prevent any disease. Warning: not for use by individuals under the age of 18 years. Do not use if you are pregnant or nursing. This product can raise blood pressure and interfere with other drugs you may be taking. Talk to your doctor about this product.



HYDROXYELITE™

COMPARE TO OXYELITE PRO™ *

**ANOTHER BLOCKBUSTER WEIGHT LOSS AID
FROM THE DIET & ENERGY SPECIALISTS -
HI-TECH PHARMACEUTICALS!**

SINCE THE DISCONTINUATION OF **DMAA** BY OTHER COMPANIES HAS LED TO THEM SPENDING MILLIONS AND MILLIONS OF DOLLARS ADVERTISING THE NEXT BEST THING..... BUT WHY WOULD YOU WANT THAT IF YOU COULD HAVE A **NEW & IMPROVED** VERSION OF WHAT YOU KNOW WORKS? YOU WOULDN'T....ENTER **HYDROXYELITE™** BY **HI-TECH** TO GIVE RETAILERS AND CONSUMERS EXACTLY WHAT THEY WANT.



IFBB Bikini Pro
Juliana Daniell

**THE HYDROXYELITE™ LINEUP...1,3 DIMETHYLAMYLAMINE (DMAA),
CAFFEINE, RAUWOLFIA CANESCENS (A.K.A. RAUWOLSCINE), BAUHINIA PURPUREA
EXTRACT, BACOPA MONNIERI EXTRACT, CIRSIIUM OLIGOPHYLLUM EXTRACT,
AND GARCINIA CAMBOGIA EXTRACT.**

Available at:



VolumeNutrition



www.hitechpharma.com • For more information, please call 1.888.855.7919.

†These statements have not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, diagnose or prevent any disease. This product should not be used in place of or as a substitute for recommendations by your healthcare professional. No clinical study has been performed on HydroxyElite™. These statements are based upon the active ingredients: (Bauhinia Purpurea L. (Leaf And Poo) Extract, Bacopa (Leaf) (Bacopa Monnieri) Extract, 1,3 Dimethylamylamine HCl, Cirsium Oligophyllum (Whole Plant) Extract, Rauwolfia Extract (Leaf And Root), Garcinia Cambogia Extract, Hydroxy Chloride Acid.

WARNING: this product can raise your blood pressure and interfere with other drugs you may be taking - talk to your doctor about this product.

*This product is not manufactured or distributed by U.S.P. Labs.



VOL.52, NUMBER 11, NOVEMBER 2015

CONTENTS

features
11.15

104

HOW TO BUILD A CLASSIC PHYSIQUE

*Get an "X-frame"
and Stand Apart
From the Masses of
Lifters Who Chase
Raw Bulk*
By Ron Harris



112

DELTS STRAIGHT OUTTA COMPTON!

*How Justin Compton Trains the Shoulders That
Will Rule the Sport* By Ron Harris



120

BEST LEGS IN THE 212 DIVISION?

Guy Cisternino Just Might Have Them! By Ron Harris

96

CODY MONTGOMERY: THE SPECIAL ONE

*Up Close and Personal With the Best
Young Bodybuilder Ever – Where He
Came From, Where He's Going and
How He Nearly Quit Last Year!*
By Peter McGough

FREE
POSTER!

SPONSORED BY
BLACKSTONE
LABS



130

WHERE HAVE THE SUPERSTARS GONE?

*As Pro Contest Lineups Suffer From a Lack of Star
Power, Insiders Are Wondering if the Current System
Is Working – An MD Special Report* By Dan Solomon

departments

THE WEIGHT ROOM

27 MD PEOPLE

30 HOW I SEE IT!

By Kevin Levrone, Shawn Ray and Dorian Yates

34 CHICK CHAT

By Bob Cicherillo

36 BODYBUILDING MECCA

By Bev Francis and Steve Weinberger

38 THE VOICE

By Dan Solomon

40 TRUE BRIT

By Peter McGough

44 GLOBAL BODYBUILDING UPDATE

By Adina Zanolli

48 DLB

By Dana Linn Bailey **NEW!**

52 MUSCULARDEVELOPMENT.COM

By Adina Zanolli



NUTRITION & PERFORMANCE

54 RESEARCH: TRAINING

By Steve Blechman & Thomas Fahey, Ed.D.

62 RESEARCH: NUTRITION

By Steve Blechman & Thomas Fahey, Ed.D.

66 RESEARCH: SUPPLEMENTS

By Steve Blechman & Thomas Fahey, Ed.D.

80 NUTRITION PERFORMANCE

Miracle Powers of Capsaicin

By Michael J. Rudolph, Ph.D.

84 SUPPLEMENT PERFORMANCE

Muscular Performance Benefits of Caffeine

By Victor R. Prisk, M.D.

94 SPORTS SUPPLEMENT REVIEW

MuscleMeds: CARNIVOR By Anthony Ricciuto

148 MUSCLETECH RESEARCH REPORT

By Team MuscleTech®

FAT LOSS

58 RESEARCH: FAT LOSS

By Steve Blechman & Thomas Fahey, Ed.D.

76 FAT ATTACK

Melatonin and Serotonin (5-HT)
Enhance Weight Loss and Brown Fat
By Daniel Gwartney, M.D.



TRAINING

92 THE M.A.X. MUSCLE PLAN

Is a Warm-up Necessary Before Lifting?

By Brad Schoenfeld, Ph.D., CSCS, FNSCA

150 MD TRAINING CAMP

With Dexter Jackson, Dennis Wolf, Dallas McCarver and Victor Martinez

154 A CUT ABOVE

By 4-Time Mr. Olympia, Jay Cutler

155 THE ANIMAL KINGDOM

By 8-Time Mr. Olympia, Lee Haney

156 ARNOLD'S CORNER

By Ron Harris

157 THE BLADE

By Dexter Jackson

158 HARDCORE Q&A

By 8-Time Mr. Olympia, Ronnie Coleman

160 THE GIFTED ONE – PHIL HEATH

By Ron Harris

161 BLOOD AND GUTS

By Dorian Yates

164 HARDCORE MUSCLE FORM AND FUNCTION

By Stephen E. Alway, Ph.D., FACSM

168 TRAINERS OF CHAMPIONS

By Master Trainer Charles Glass, Contest-prep Specialist Fakhri Mubarak, The Pro Creator Hany Rambod and IFBB Pro Guru, George Farah



DRUGS

70 RESEARCH: DRUGS

By Steve Blechman & Thomas Fahey, Ed.D.

134 TESTOSTERONE T Boosters: Comparing

Pharmaceuticals to Supplements

By Daniel Gwartney, M.D.

144 ANABOLIC RESEARCH UPDATE

By William Llewellyn

166 BUSTED! LEGAL Q&A

By Rick Collins, JD, CSCS



HEALTH & PERFORMANCE

64 RESEARCH: HEALTH & PERFORMANCE

By Steve Blechman & Thomas Fahey, Ed.D.

72 RESEARCH: SEX

By Steve Blechman & Thomas Fahey, Ed.D.

88 MUSCLE GROWTH UPDATE

Turning Up the Heat? Or Cold? For Muscle Strength and Growth

By Michael J. Rudolph, Ph.D.

140 BODYBUILDING SCIENCE

Why MD Is the #1 Source for Bodybuilding Science

By Michael J. Rudolph, Ph.D.

INSIDE STACK

16 EDITOR'S LETTER

By Steve Blechman

172 MARKETPLACE

By Angela Theresa Frizalone & Manda Machado

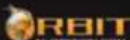
IRONMAG LABS FOR THE LOVE OF MUSCLE

JON WARD
BODYBUILDER

CLAUDIA OLIVEIRA
FITNESS MODEL

SAVE 20% ONLINE WITH CODE MDNOV
IRONMAGLABS.COM | #MAKEYOURMARK

TO BECOME AN IRONMAG LABS RETAILER, CALL US TOLL FREE: 800-815-3350





SABRINA TAYLOR
PHYSIQUE PRO

**Can be used by
Males and Females!**

**Powerful Pro-Anabolic
Compound**

**Increases Lean
Muscle Mass**

Promotes Fat Loss



IML

IRON MAG LABS



**SELECTIVE
ANDROGEN
RECEPTOR
MODULATOR**



NEW! SCIENTIFIC BREAKTHROUGH FORMULA!

MaxxTOR DELIVERS MIND-BLOWING RESULTS IN ONLY 8 WEEKS!



MaxxTOR™ is a truly revolutionary and innovative new product from Max Muscle Sports Nutrition that contains the key patented ingredient proven to significantly increase muscle protein synthesis, muscle size, strength and power while at the same time decrease body fat.

The **MaxxTOR™** formula developed by the Research & Development Team at Max Muscle Sports Nutrition has combined Mediator® Phosphatidic Acid with other key synergistic ingredients including L-Leucine, Beta-Hydroxy-Beta-Methylbutyrate (HMB) and Vitamin D3 to deliver the most powerful mTOR Signaling Activator ever developed.†

MaxxTOR™ is the ONLY formula that combines these key ingredients in the correct, efficacious amounts.

A recent double-blind research study using Mediator® Phosphatidic Acid with resistance training produced the following dramatic results:

- **Subjects gained 5.3 lbs. of lean muscle mass!*****
- **Subjects lost 2.9 lbs. of fat mass!*****
- **Subjects gained 47% in bench press strength!*****

***Based on results from an 8 week research study using Mediator® Phosphatidic Acid and resistance training conducted by Dr. Jacob Wilson at The University of Tampa, Tampa FL.

Mediator® PA is a registered trademark of Chemi Nutra. Mediator® PA is protected under patents pending by Chemi Nutra.

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

People across America are achieving amazing results with MaxxTOR!



"My personal results were nothing less than outstanding as I lost 15.1 lbs of body fat (7.5% body fat) and gained 5.1 lbs of muscle in less than 8 weeks!"

Dr. Guillermo Escalante—Upland, CA
Adjunct Professor of Kinesiology, Cal State San Bernardino

"From the first time I started taking MaxxTOR I was hooked. After the first week, there was a noticeable improvement and it just kept getting better."

Alvin Cooper—Dunnigan, CA



"I gained 8.5 lbs. of lean muscle and lost 11.7% body fat. When I saw the results of my In Body scans after only 8 weeks of using MaxxTOR I was floored."

Andy Fidino—Eugene, OR



BONUS OFFER!

STIMULANT-FREE CLEAN ENERGY!

FREE MiTOR!
with PURCHASE OF MaxxTOR!

- Mitochondrial Cellular Bioenergetics Formula
- Supports Healthy Muscle Mitochondria Function†
- Promotes Cellular Oxidative Phosphorylation and ATP Energy Production†
- Designed to stack with MaxxTOR to maximize results

*MiTOR is a \$35.99 value. Offer good at participating Max Muscle stores. No store near you? Go to maxmuscle.com and enter code FREEMITOR at checkout. Cannot be combined with Frequent Buyer Points or any other sales. Certain product restrictions may apply.

Available at:



MAX MUSCLE
SPORTS NUTRITION



n nutrition
by MAX MUSCLE®

Find us on:



WHAT IS YOUR FITNESS AGE?

TAKE THE TEST AT
MAXFITNESSAGE.COM

Find a Store Nearest You @ maxmuscle.com • Franchise Opportunities Available



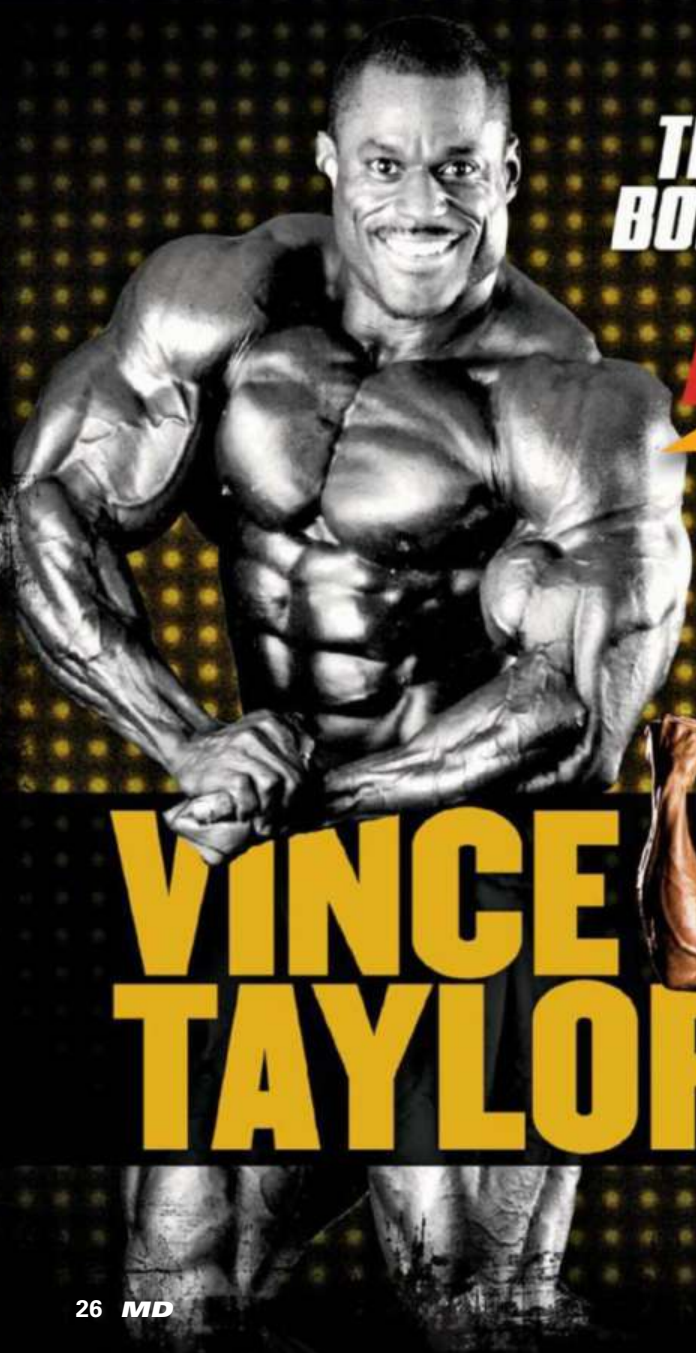


NOVEMBER 2015



**NEWS & VIEWS
FROM THE WORLD
OF BODYBUILDING**

WEIGHT ROOM



**ONE OF
THE GREATEST
BODYBUILDERS
OF ALL TIME**

THE VOICE BY DAN SOLOMON

**SEE
Pg. 38**

VINCE TAYLOR



27

MD PEOPLE

SIGHTINGS FROM THE TAMPA PRO
PHOTOGRAPHY BY TEAM MD

30

HOW I SEE IT!

EXCLUSIVE PUBLISHING CONTRACTS:
ARE THEY YESTERDAY'S NEWS?
BY SHAWN RAY, DORIAN YATES
AND KEVIN LEVRONE

34

CHICK CHAT

A TALE OF TWO CHAMPIONS
BY BOB CICHERILLO

36

BODYBUILDING MECCA

BY BEV FRANCIS AND STEVE WEINBERGER

40

TRUE BRIT

JAY CUTLER: OLYMPIA MEMORIES
BY PETER MCGOUGH

44

**GLOBAL BODYBUILDING
UPDATE**

BY ADINA ZANOLLI

48

DLB

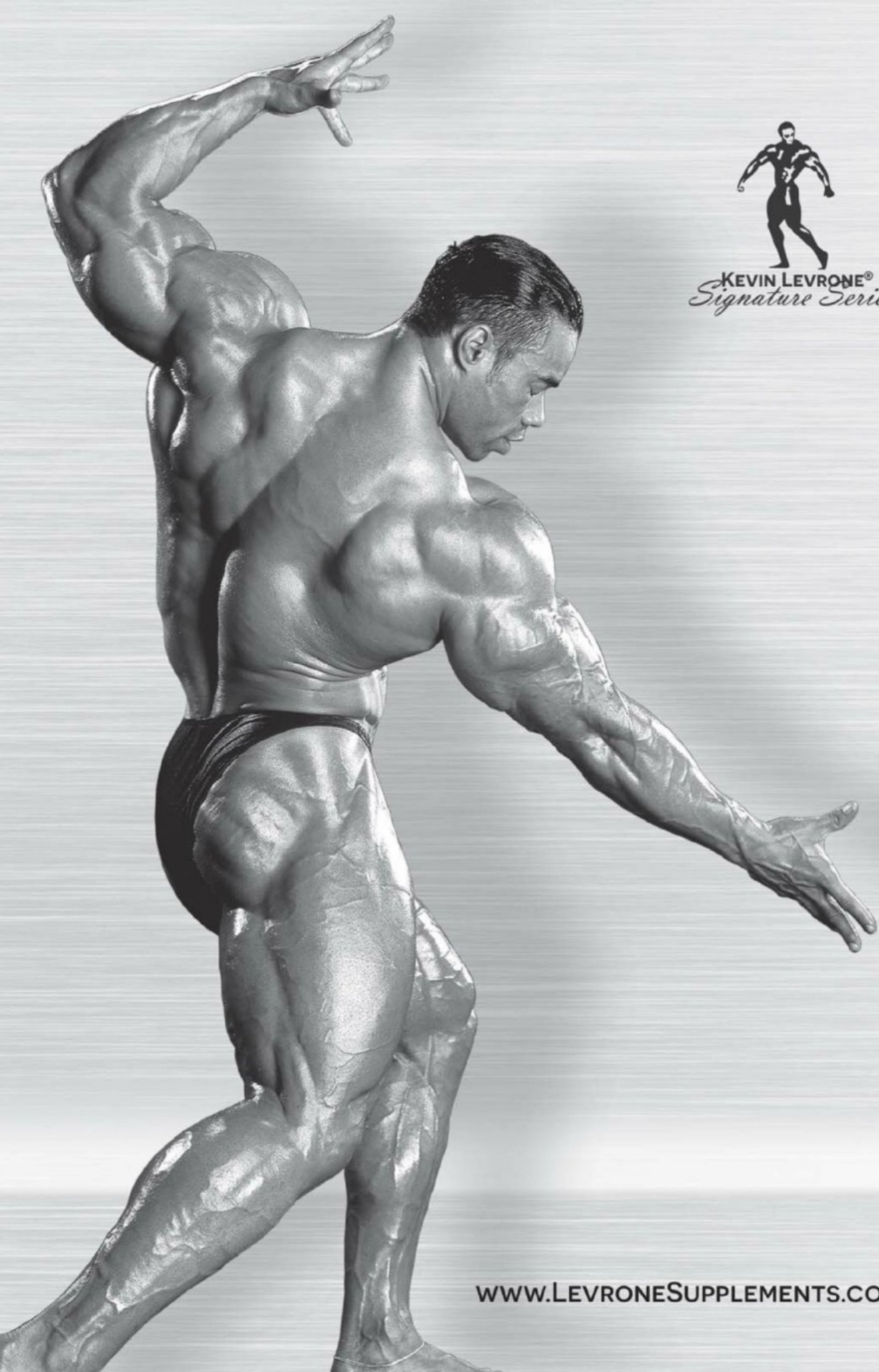
WHY I DIDN'T DO THE
OLYMPIA THIS YEAR
BY DANA LINN BAILEY

52

**MUSCULAR
DEVELOPMENT.COM**

BY ADINA ZANOLLI





KEVIN LEVRONE®
Signature Series

WWW.LEVRONESUPPLEMENTS.COM

"NEVER GIVE UP ON YOUR DREAMS
BELIEVE IN YOURSELF
HAVE FAITH IN YOU ABILITIES
WHAT THE MIND BELIEVES,
THE BODY WILL BECOME"

– KEVIN LEVRONE

„MARYLAND MUSCLE MACHINE”
PRESENTS
THE SIGNATURE SERIES



HOW I SEE IT!

WITH **SHAWN RAY, DORIAN YATES AND KEVIN LEVRONE**

Muscular Development is proud to bring you "How I See It," featuring three IFBB Hall of Fame bodybuilders, and legends of the industry that we are honored to have on Team MD. Between Shawn Ray and Kevin Levrone, they have a total of six runner-up finishes at the Mr. Olympia, and Dorian Yates won the Mr. Olympia title six consecutive times.

EXCLUSIVE PUBLISHING CONTRACTS *ARE THEY YESTERDAY'S NEWS?*

Exclusive publishing contracts for athletes have been part of bodybuilding magazines for roughly 25 years. Now, with the advent of social media, bodybuilders can and will post continually on Facebook, Twitter, YouTube, etc. Some have suggested a smarter solution for the magazines would be to simply pay athletes for content, with exclusive contracts being made a thing of the past. What do you think is the best way to handle things for both the magazines and the athletes in 2015 and moving forward? Should the current system of exclusive contracts continue?

SHAWN RAY

"Exclusive contracts" should be abandoned for several obvious reasons. First, the term "exclusive" is not actually adhered to by the athletes, thereby making any such agreement null and void as soon as the athlete shares information with another media source, be it social or print. Every athlete these days posts on social media. What's more, today's athletes typically don't engage on bodybuilding forums where the fans are, they wear supplement company apparel in photo shoots, rarely mention their exclusive publishing deal and make information and updates available on their on social media platforms—instead of the contractual publication platform where information should appear first! Rarely are there personal or competitive appearance requirements made of the athletes, thereby limiting the visibility and marketing of the publication deals. Since the publications are paying for exclusivity and not getting it anymore, why should they continue with these contracts?

Publishers should utilize a "pay as needed" flat-rate fee for athlete photo shoots and/or personal appearances, period. There is zero ROI (return on investment) by the publisher to pay out sponsor

"IT'S RIDICULOUS TO ME THAT ANYONE WOULD PAY AN ATHLETE WHO DOES NOT CONTRIBUTE, ADVERTISE OR BARELY SUPPORT A PAYING SPONSOR. REMEMBER, THIS IS A BUSINESS, NOT A CHARITY."

salaries to athletes who do not even give a company shout-outs in interviews or drive traffic to the digital component of the print magazine family. The majority of the sponsored athletes even avoid interviews following the prejudging, when things don't go well for them (which is often any time they are not in contention for the win) and following the finals, leaving the digital publishing advertising void of content. I'm all for helping athletes promote and market themselves on a global scale, but I'm totally against the publishers paying athletes to remain invisible and support the lack of promotional advertising for the publisher, publication and the business of bodybuilding!

The days of the professional athletes freeload off generous publishers are

over, in light of the growing costs of publishing and fewer paying print advertisers. Monetarily, it simply makes sense to have athletes on a "pay as needed" basis due to athletes choosing to have longer off-seasons, fewer photo shoots and posting more on their on social media and not on the publishing platforms. It's ridiculous to me that anyone would pay an athlete who does not contribute, advertise or barely support a paying sponsor. Remember, this is a business, not a charity.

My advice to athletes competing today is simple. Do more than necessary, work harder than others, promote sponsoring companies paying you more than you promote yourself, and make yourself invaluable to companies offering you financial support!

In conclusion, my thought is that paying an athlete to do nothing, month after month, will bleed the product and company of financial resources that otherwise could be used to build a better product and a sustainable brand in the short and long run. The days of the past are over, and "pay as needed" should be the rule, not the exception.

#TeamMD4Life
Twitter: @sugarshawrray

PRIME YOUR SYSTEM FOR GREATER LEANNESS + MUSCLE DEVELOPMENT!



When it comes to building an elite-level physique, there are no shortcuts. You need the drive to train hard, the discipline to eat right, and the dedication to repeat the process month after month.

If you've got that kind of fortitude, allow us to introduce you to THERMOSTERONE™. Each serving packs 23 strategically-selected active ingredients designed to help **ignite pre-workout energy, boost caloric expenditure, and support anabolism.** All in one.†

Nothing will make up for skipped workouts, bad diet, or insufficient recovery, but THERMOSTERONE™ might be just the adjustment that you need to bring your physique to the next level.†



† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.



OUT OF THE LAB
OUTOFTHELAB.NET

P: +855.996.6285
SUPPORT@OUTOFTHELAB.NET

“CONTRACTS JUST DON’T MAKE SENSE ANYMORE. INSTEAD, MAGAZINES SHOULD PAY THE ATHLETES FOR CONTENT. PAY THEM FOR PHOTO SHOOTS, VIDEO SHOOTS AND INTERVIEWS.”— KEVIN LEVRONE

DORIAN YATES

Ultimately, whether or not to continue the practice of exclusive publishing contracts is a business decision that the magazines have to make based on whether or not they feel they can get the proper value out of the arrangement. You hear a lot of people saying that print is a dying media form. I’m nostalgic. I still like magazines. A lot of us still want to hold that printed word in our hands. It’s like newspapers. You can read all the news online now, yet there are still daily newspapers in every major city in the world. Bodybuilding magazines have a special place in my heart, as they played a huge role in my early education as a bodybuilder. I still have an extensive collection of older magazines like *Iron Man* and *Muscle Builder* going back to the ‘60s and ‘70s, and nothing online could ever replace those.

One thing I still appreciate about magazines is that for the most part, you have to have some legitimate credentials to get published. Any fool can proclaim himself an expert online and spread misinformation to the masses. At the last BodyPower Expo in the U.K., I was surprised to see more than a few men and women with fans eager to meet them, who I had never heard of. I was told they had large online and social media followings. Obviously, social media is changing the industry at a rapid pace. So with all the pictures, videos, blogs and so on that are posted for free, why would a magazine pay an athlete or an expert to be exclusive for print? One reason that might still make sense is to get exclusive content from them that won’t be available anywhere else. For instance, the two-part discussion about steroids that I did along with Shawn Ray and Kevin Levrone nearly a year ago here in MD was something you couldn’t read anywhere else. You had to buy MD to get that. Later on, MD posted it on their site and it quickly went viral online as it was posted and shared.

I think magazines should start being a little more creative and think of other types of exclusive content that would

be similarly interesting and valuable. If you have these athletes and experts who all have their own fan bases, they would be willing to buy magazines if it were the only place they could read about certain things. It would only be a matter of coming up with subjects and types of discussions the fans and readers really wanted to hear about, and making sure that your particular magazine was the only place they spoke about that. I know things have changed quite a bit since the heyday of publishing contracts in the 1990s, before the Internet and especially before Facebook, Twitter, Instagram, YouTube and podcasts. But print magazines are still a viable and important media format, and they still have the potential to remain both relevant and cutting edge. How they decide to handle the whole area of contracts and exclusive content is something they will have to figure out in this new age.

Facebook: Dorian Yates

KEVIN LEVRONE

If I owned a magazine, I would have to recognize by now that social media has drastically changed the game when it comes to any type of exclusivity. If you are thinking in terms of ROI or return on investment, you can’t get ROI on an exclusive contract anymore, for the simple fact that your publication will not be the only place the readers and fans can see and hear these athletes. Anybody with a smartphone can see the photos and videos the athletes post on Facebook, Instagram, Twitter and YouTube.

Things were very different in the ‘90s, before the dawn of the Internet. Back then, the magazines truly were the only way you could see photos of the stars and read about them in interviews and training

articles. Joe Weider used to have 15-20 athletes signed exclusively to his publications at any given time. I was one of them, for years. As contracted athletes, we could only do photo shoots with Weider photographers, and we could only speak with Weider writers. We were paid well to be exclusive, and it was expensive to keep that stable of athletes under contract. But again, in those days it made sense because our fans had to buy his magazines every month to see our images and learn how we trained and ate. Now, any fan can have a relationship with his favorite pro via social media. The athletes will post all types of pictures and video clips, talk all about their workout or their meals that day, and the best part for the fans is, they can comment and ask questions and often get answers pretty fast.

There is so much content available to anyone with an Internet connection for their phone, computer or tablet that many of them don’t see the point in buying a magazine anymore. But I for one still feel magazines have a valuable place in our sport and industry. A lot of us still like to hold it in our hands and turn the pages. And as far as content, magazines can get a lot deeper than a 140-character Twitter post can. If you really want to read in-depth interviews, profiles and learn how these athletes train, magazines like MD are still the best way.

As for contracts, they just don’t make sense anymore. Instead, magazines should pay the athletes for content. Pay them for photo shoots, video shoots and interviews. If I were starting a magazine today, that’s how I would do it. And if I had anyone under contract, it would be writers and photographers who have their own unique and recognizable styles.

Facebook: Official.Kevin.Levrone
Twitter: @LevroneKevin
Instagram: KEVINLEVRONE
www.levronereport.com
www.levronesupplements.com ■

“WITH ALL THE PICTURES, VIDEOS, BLOGS AND SO ON THAT ARE POSTED FOR FREE, WHY WOULD A MAGAZINE PAY AN ATHLETE OR AN EXPERT TO BE EXCLUSIVE FOR PRINT?”— DORIAN YATES

PRE-TRAINING ENERGY + CALORIE BURNING + LEAN MUSCLE SUPPORT[†]



ALL IN ONE!

NEW

- ✓ ANABOLIC + THERMOGENIC + INTENSITY[†]*
- ✓ INTELLIGENT BODY WEIGHT DOSING[†]
- ✓ TRANSPARENT LABELING (NO BLENDS)
- ✓ ADVANCED DELIVERY TECHNOLOGY[†]
- ✓ POWERFUL EFFECTS[†]*

OUTOFTHELAB.NET

[†] These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

* This product won't work miracles. You still need to eat sensibly, train hard, and get adequate rest to achieve desired results.





WHERE'S BOB? 2015

NOVEMBER 7TH

IFBB/NPC IOWA PRO

NOVEMBER 14TH

NPC ROCKY MOUNTAIN
CHAMPIONSHIP, COLORADO

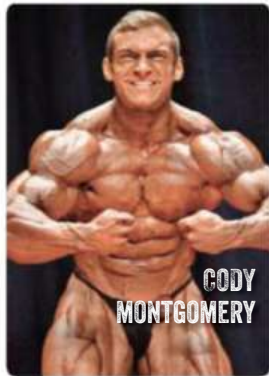
NOVEMBER 21ST

NPC NATIONALS, MIAMI

A TALE OF TWO CHAMPIONS

The USA Championships will forever be my most memorable and proudest achievement as a competitive bodybuilder. A culmination of 13 years of hits and misses, should've, would've and could've. The 2000 USA would be the final answer to a long list of questions, and removing me from another list ... the "best amateurs to never turn pro."

Cut to the present: the 2015 NPC USA Championships held in Las Vegas Nevada. Now holding a mic courtesy of my longtime friend, super promoter Jon Lindsay aka "The Captain," I introduce the contenders for the light heavyweight class. Its crystal clear from the prejudging that a young kid named Cody Montgomery will win the class ... EASILY. It's also noted that the "young kid" is REALLY young ... like 20 years old young!



CODY MONTGOMERY

His name isn't unknown—he's won the Teen Nationals title three years running as well as having a collegian title to his credit—but at 20, still impressive to say the least that he's leading the pack at the USA for a pro card and possible overall title. Twenty years old ... I've got Otomix shoes older than this kid!

The overall posedown was a formality at best, as "the kid" won first-place votes

NOT ALL CHAMPS ARE CREATED EQUAL, NOR DO THEY ALL FOLLOW THE SAME ROAD TO SUCCESS.

across the board for a clean sweep and the title of 2015 Mr. USA! Welcome to the pros,

kid. To say he has a promising career would be the understatement of the year. Could we be looking at a future Mr. Olympia? Sure ... why not? The timing is right. He doesn't need much work to be a top pro and qualify—and by the time he's standing on the Olympia stage, our current champ, Phil Heath, might just be about ready to give this kid a REAL gift—retirement, after his eighth or ninth Sandow. But this is clearly the exception to the rule. While most National champs don't take 13 years to turn pro, most

don't take a whopping (one) show either.

Which brings us to my friend, Blair Mone. I met Blair many years ago in Rochester, New York. He was friends with former pro Jeremy Freeman, and would often come to the shows in the Rochester/Syracuse area. Nice guy, thick build ... working toward getting on a National stage ... placing in the top five pretty early on. Should only be a matter of another year or two before he's a pro, right? This was 2003, by the way. Granted, there was a self-imposed moratorium of five years as Blair went the WWE route, but time waits for no man, and no bodybuilder. Of all the things that bodybuilders face in terms of adversity, TIME is the number one enemy.

Blair returned to the NPC stage in 2010, with mediocre results ... STILL looking for the magic combination. The 2014 Nationals would play out with a near miss as Blair showed up in his best-ever shape/condition—but came up short ... again. But, much like my own story, this wasn't a setback—it was a fire that set the pace for the next show. Could the next one be mine? Is it finally MY time? Also mirroring my own tale, I placed second at the 1999 nationals, and then set my sights on the 2000 USA. Blair would do the same, also ignoring those who suggested waiting till NEXT year's Nationals.

As the prejudging concluded, I found my way out to the lobby and found my way over to the better half of the Mones ... his lovely wife, Jessica. She told me Blair was looking for me. I found Blair a few minutes later and gave him my opinion ... this was it! Just keep it together, nothing crazy ... and it's yours. I'm the ONLY one who knows what this road was like for Blair—the disappointments, the frustration and the naysayers. I'm also the ONLY one who knows what's coming ... the joy, the relief and the peace of knowing that you FINALLY did it. No caveats, no "Masters" card, no gimme. As the super heavys take the stage, I can't help but think back to 15 years ago, on that very stage, in that very spot ... looking over in the wings to see them holding the trophy and wondering: Is this it? The results are in my hand ... "And please take the first-place award and the IFBB pro card, ... BLA-... the rest is drowned out by the deafening applause of the audience, but that's all he needed to hear.

Not all champs are created equal, nor do they all follow the same road to success. Congratulations to Cody and Blair—two guys with different destinies, but who share the same destination. ■



BLAIR MONE

Bob Cicherillo is the IFBB Athlete Representative and one of bodybuilding's best-known personalities. He is an IFBB pro who placed first and overall as a super heavyweight in the USA Championships and first in the Masters Pro World. Bob is host of over 20 bodybuilding shows throughout the season, including the Mr. Olympia.

NEW!

BODYBUILDING'S MOST CLINICALLY VALIDATED TRILOGY



HOW IT WORKS



The groundbreaking compounds in Clear Muscle®, Phospha Muscle™ and Plasma Muscle™ all work on separate musclebuilding mechanisms of the mTOR enzyme – the body's primary regulator of muscle growth – to activate protein synthesis and put your body into a prime anabolic state.

INGREDIENTS BACKED BY UNIVERSITY OF TAMPA RESEARCH

- Take them separately or stack them for unprecedented gains in muscle size
- Delivers extreme anabolic & anti-catabolic effects
- The only musclebuilding pills with Mediator® PA, BetaTOR®, PEAK ATP® & OptiNOs®
- Clinically dosed based on research conducted at The University of Tampa
- Studies published in multiple peer-reviewed journals
- Protected by 6 patents & pending patents
- Fully disclosed formulas – no proprietary blends

PHOSPHA MUSCLE™

Clinically dosed with Mediator® PA – the world's purest form of phosphatidic acid, which helped study subjects build 5.3 lbs. of lean muscle and boost 1-rep max leg press strength by 60% in 8 weeks.

CLEAR MUSCLE®

Delivers patented BetaTOR® – an exclusive metabolite and free-acid derivative of leucine and HMB, which was shown in university research to help study subjects pack on 16.3 lbs. of lean muscle in 12 weeks.

PLASMA MUSCLE™

Features an exclusive combination of patented PEAK ATP® and OptiNOs®. PEAK ATP® helped study subjects gain 8.8 lbs. of lean muscle in 12 weeks while boosting strength by 147%, and the premium ingredients in OptiNOs® helped subjects boost strength and crank out 4 times more reps than the control group.

MUSCLETECH.COM

GNC
LIVE WELL

WITE
AID

B

BODYBUILDING.COM

theVitamin
Shopper

MS

100%

LOVE STAR

TRAILBLAZER
USA

Discover how it works at:
MusclebuildingTrilogy.com

BetaTOR® is a registered trademark of Metabolic Technologies, Inc., and use of HMB is licensed from Metabolic Technologies, Inc. Uses of HMB are covered by pending patent applications owned by Metabolic Technologies, Inc., and U.S. patent number 6,103,764 licensed by Metabolic Technologies, Inc. PEAK ATP® is a registered trademark of TSI USA Inc. and is used under license. Uses of ATP are licensed to Iovate by TSI USA Inc. under U.S. patent numbers 6,723,737; 7,671,038; and 7,629,329. Mediator® PA is protected under patents pending by Chemi Nutra. Mediator® PA is a registered trademark of Chemi Nutra. OptiNOs® is a registered trademark of Laila Nutraceuticals. Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

EAST COAST MECCA NEWS

There's no summer slowdown at Bev Francis Powerhouse Gym! The gym stayed busy with plenty of visitors mixing in with our dedicated members (who don't take off for the beach). On the NPC front, we were fortunate to run the biggest contest in the history of the Northeast, with over 800 competitors at the 2015 NPC Universe! Here's a look back at the East Coast Mecca's summer of 2015.



IFBB pro Stacey Alexander came all the way from Las Vegas to hold a seminar for bikini competitors.



NPC News Online Editor-in-Chief Frank Sepe and 212 pro Marco Rivera.



Kai Greene putting in the work as the Olympia draws near.



O'Hearn also brought his trusty training partner.



Mike O'Hearn visits the Mecca.



NPC USA Bikini champion Tiffany Urrea.



NPC Universe overall champions and new IFBB pros!



The Boss, Jim Manion, with Arnold Classic Men's Physique champion Sadik Hadzovic.



New IFBB pro John Meadows with the Boss.



Big Steve, Juan Morel, Stephanie Mahoe, Candice Keene and Tyler Manion.



Juan and Karen Morel with a baby on the way!



Emcee Shannon Dey and expeditor Gen Strobo still looking great after a long day.

UPCOMING CONTEST SCHEDULE

OCTOBER 10, 2015: NPC East Coast Cup (East Haven, CT) **ONLINE ENTRY & TICKET SALES—**
BEVFRANCIS.COM/NPC NORTHEAST
SPECIAL GUEST POSER:
SHAWN RODEN

OCTOBER 17, 2015: NPC Greater NY Championships (Syracuse, NY) **ONLINE ENTRY & TICKET SALES—**
BEVFRANCIS.COM/NPC NORTHEAST
SPECIAL GUEST: FOUR-TIME MR. OLYMPIA JAY CUTLER
GUEST POSER: JUAN MOREL

OCTOBER 24, 2015: NPC New York State Grand Prix (Poughkeepsie, NY) **ONLINE ENTRY & TICKET SALES—**
BEVFRANCIS.COM/NPC NORTHEAST
SPECIAL GUEST: THREE-TIME OLYMPIA 212 CHAMP, FLEX LEWIS!

OCTOBER 31, 2015: NPC Eastern USA Championships (Teaneck, NJ) **ONLINE ENTRY & TICKET SALES—**
BEVFRANCIS.COM/NPC NORTHEAST
SPECIAL GUEST POSER: IFBB PRO DENNIS WOLF!

NOVEMBER 14, 2015: NPC New England Championships (Boston, MA) **ONLINE ENTRY & TICKET SALES—**
BEVFRANCIS.COM/NPC NORTHEAST
SPECIAL GUEST: FOUR-TIME MR. OLYMPIA JAY CUTLER!



Keep up with all of the news at the East Coast Mecca and the NPC NORTHEAST by following us on Facebook (facebook.com/bevsgym) and check out bevfrancis.com for the complete contest schedule, entry forms and ticket sales!

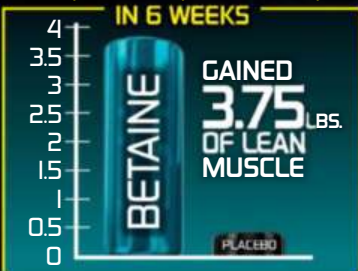
SUPERIOR MUSCLEBUILDING FORMULAS & UNRIVALED TASTE

NEW!



NATURALLY SOURCED
CAFFEINE

LEAN BODY MASS GAINED IN 6 WEEKS



Study subjects put on 3.75 lbs. of lean muscle in 6 weeks in leading university research published in the *Journal of the International Society of Sports Nutrition*.

The most advanced strength-enhancing BCAA+ formulas from MuscleTech® are here. Introducing AMINO BUILD® NEXT GEN and AMINO BUILD® NEXT GEN ENERGIZED. Both fully disclosed formulas deliver powerful strength-building and endurance based on 4 gold-standard clinical trials, plus mouthwatering flavors perfected by the world's top flavor experts. Amplify your performance with AMINO BUILD® NEXT GEN from MuscleTech® – try both powerful formulas today!

AMINO BUILD® NEXT GEN & NEXT GEN ENERGIZED

- Clinical doses of key ingredients shown to build muscle & strength
- Core ingredients backed by 4 clinical studies
- Coconut water and watermelon juice complex, plus electrolytes
- Energized formula delivers naturally sourced caffeine for instant energy, focus & intensity
- Amazing refreshing taste!

3.75 LBS. OF MUSCLE

Test subjects supplementing with 2.5g of betaine built 5.5 times more lean muscle than the placebo group (3.75 lbs. vs. 0.66 lbs.). In a separate study, betaine was shown to enhance muscle endurance.

40% MORE STRENGTH

Precisely formulated with a 4g dose of ultra-anabolic leucine, shown in clinical research published in the *International Journal of Sports Physiology and Performance* to help subjects increase their 5-rep max strength by over 40%.

4 BOLD FLAVORS

Get AMINO BUILD® NEXT GEN in mouthwatering Icy Rocket Freeze, White Raspberry, Fruit Punch Splash & Watermelon flavors. The ENERGIZED formula is available in Blue Raspberry, Fruit Punch Splash, Orange Pineapple & Concord Grape.



MUSCLETECH.COM

Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

SUPERIOR SCIENCE. SUPERIOR RESULTS.™



THE VOICE

FEATURING **DAN SOLOMON**

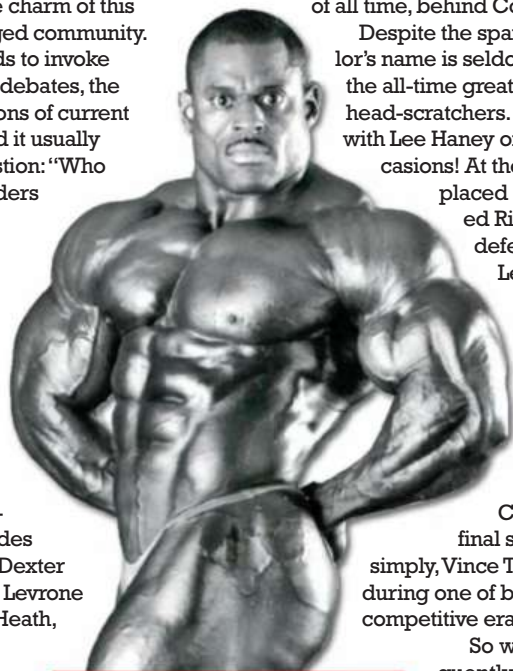


DON'T FORGET VINCE!

As bodybuilding fans, we love a good debate. We argue about everything from diet strategies to contest results. In a strange way, it's part of the charm of this quirky, testosterone-charged community. There's one topic that tends to invoke some of the most spirited debates, the kind that merge the opinions of current and prior generations, and it usually begins with a simple question: "Who are the greatest bodybuilders of all time?"

The debate typically includes the same names, the usual assortment of legendary physiques. Men named Arnold, Reeves, Haney, Dorian and Coleman, iconic champions who were way ahead of their time. There's also that other group of bodybuilding royalty, a list that includes the likes of Flex Wheeler, Dexter Jackson, Shawn Ray, Kevin Levrone and reigning champ Phil Heath, among others. The have some of the sport's most celebrated genetics, and a case for "all-time greatness" can be made for each of them.

I'm often puzzled by the absence of one name in particular, a decorated champion rarely mentioned



"TAYLOR WOULD AMASS A TOTAL OF 22 PROFESSIONAL TITLES, MAKING HIM THE SECOND MOST VICTORIOUS CHAMPION OF ALL TIME, BEHIND COLEMAN."

in these discussions. Back in 1988 a light-heavyweight named Vince Taylor won the overall title at the NPC Nationals. He would immediately become one of the most feared competitors in bodybuilding, winning a remarkable seven times during his initial two seasons on the pro circuit. He placed third in each of his first two Olympias, sharing first callouts with Haney and Yates. In 1992 he won the Arnold Classic and was widely considered one of the most consistently prepared bodybuilders of his era. By the time his career ended in 2008, Taylor would amass a total of 22 professional titles, making him the second most victorious champion of all time, behind Coleman.

Despite the sparkling resumé, Taylor's name is seldom mentioned among the all-time greats. It's one of the great head-scratchers. He went toe-to-toe with Lee Haney on two separate occasions! At the '89 Olympia, he placed ahead of the celebrated Rich Gaspari, in '91 he defeated the legendary Lee Labrada and in '96 he out-dueled Shawn Ray in Columbus. Take a look at the results of the '95 Olympia. You'll find Taylor's name ahead of guys like Flex Wheeler and Chris Cormier on the final scorecard! To put it simply, Vince Taylor was a superstar during one of bodybuilding's most competitive eras.

So why is his name so frequently excluded from the conversation? Some have suggested that the memory of Vince's greatness has been clouded by a decision he made in the mid-stages of his career, shortly after turning 40. Despite another strong

top four finish at the '95 Olympia, Vince decided to forego the '96 Olympia in favor of the Masters Olympia, an event open to any pro bodybuilder who had reached the age of 40. Not only did Vince easily win the event, but also he would go on to win that title five times. Suddenly his battles with the likes of Nasser and Levrone were replaced by comparisons with Masters Division rivals like Sonny Schmidt, Don Youngblood and Flávio Baccianini. Vince was no longer sharing callouts with bodybuilding's present day elite.

A good case could be made that his decision to monopolize the Masters division was a colossal mistake, a re-branding that completely altered Taylor's legacy. When asked about Vince Taylor, most fans today will recall those crowd-pleasing "Terminator" posing routines and his more recent dominance of a division reserved for men well beyond their prime.

A more astute fan will look beyond the Masters titles, recalling that Taylor is an Arnold Classic champion and he remains one of only four members of professional bodybuilding's 20 Win Club, a rarefied Mount Rushmore that places Vince alongside men whose greatness is never questioned.

The next time you find yourself in one of those debates, remind yourself of those memorable showdowns with Haney, Yates and Gaspari. Take a closer look at the mastery of a guy whose legacy was earned long before he became a Masters champion—and consider the possibility that Vince Taylor's body of work may be worthy of a spot among the greatest of all time. ■

Dan Solomon is the Senior Features Editor at Muscular Development. For nearly 15 years, Dan has conducted many of the most prominent bodybuilding interviews of all time, including memorable visits with Arnold Schwarzenegger, Joe Weider and other icons of the sport. Creator of the popular "PBW Radio" program, Dan has served as moderator of the Olympia Press Conference and lead commentator at many of the world's biggest bodybuilding events. Follow Dan on Twitter @DanSolomon100 and tune in to PBW at www.MuscularDevelopment.com/pbw.

NEW, SUPERIOR, CLINICALLY DOSED PRE-WORKOUT

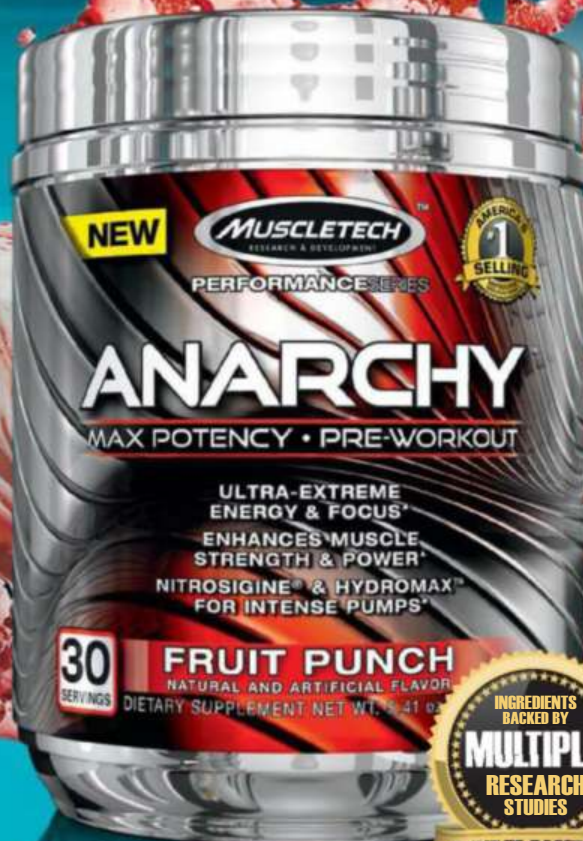


REVOLUTIONIZED FOR INTENSE PUMPS AND SUPERIOR PERFORMANCE

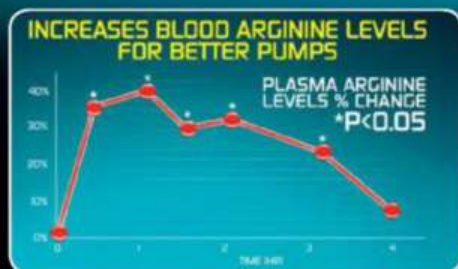
MuscleTech® researchers have reinvented the pre-workout category. To force an intense muscle pump, Anarchy® features patented Nitrosigine® and HydroMax™ glycerol. It also features a one-of-a-kind combination of unique ingredients, such as *Rhodiola*, choline, theanine and more, that's been perfected through countless sensory tests. Anarchy® is also formulated with patented CarnoSyn® for enhanced muscle, strength and power.

- The only pre-workout that delivers HydroMax™, Nitrosigine®, CarnoSyn® and more
- Ingredients backed by multiple research studies
- Fully disclosed label

Just check out our fully disclosed label to see for yourself why Anarchy® is the only pre-workout that delivers unmatched performance, unlike obsolete formulas that underdose their ingredients. And because it's from MuscleTech®, the trusted brand backed by 20 years of excellence, you know it's a best-in-class formula that delivers results. Get it today.



THE ANARCHY™ ADVANTAGE



Nitrosigine® has been clinically shown to boost blood arginine levels in test subjects within just 1 hour of their first dose.

	ANARCHY®	COMPETITOR 1	COMPETITOR 2	COMPETITOR 3
Nitrosigine®	1.5g	Zero	Zero	Zero
HydroMax™	1g	Zero	Zero	Zero
L-theanine	150mg	Zero	Zero	Zero
Choline bitartrate	200mg	Zero	Zero	Undisclosed Amount
Rhodiola	100mg	Zero	Zero	Zero
Beta-alanine	3.2g	3g	Zero	2g

Amounts displayed on the chart are based on a full dose.

MUSCLETECH.COM

1,000 MC HYDROMAX™

HydroMax™ glycerol is 10 times more concentrated than the competitor's glycerol monostearate.

1,500 MC NITROSIGINE®

Nitrosigine® is a novel form of arginine and silicon that's been clinically shown to increase nitric oxide levels in research conducted at a human performance lab at a prestigious research center in Miami.

3,200 MC PATENTED CARNOSYN®

2 scoops of Anarchy® deliver 3,200mg of patented CarnoSyn® beta-alanine. This is more than the competition. It has also been shown to accelerate musclebuilding in a study published in the *Journal of Strength and Conditioning Research*.



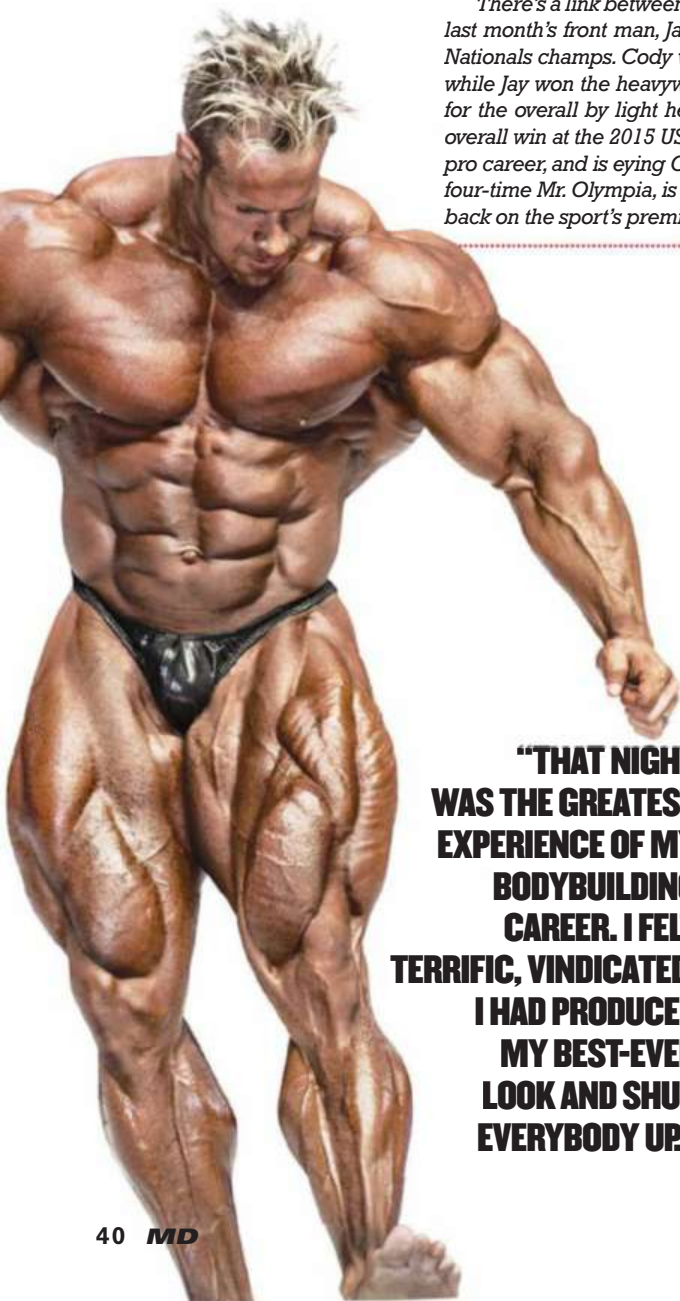
*Per 2 scoops. Nitrosigine® is protected under U.S. patent numbers #5,707,970; #6,156,735; #6,344,444; #7,576,132. The Nitrosigine® name and logo are federal trademarks of Nutrition 21, LLC. CarnoSyn® is protected under U.S. patent numbers #7,825,084; #8,067,381; #8,129,422; #8,470,865. CarnoSyn® trademarks are owned by Natural Alternatives International, Inc. HydroMax™ is a trademark of Glanbia Nutritionals. Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015



WITH **PETER MCGOUGH**

JAY CUTLER:

OLYMPIA MEMORIES



There's a link between this month's cover model, Cody Montgomery, and last month's front man, Jay Cutler, due to them both having been Teenage Nationals champs. Cody won the overall three times (2012, 2013 and 2014) while Jay won the heavyweight division back in 1993, before being bested for the overall by light heavy winner Branch Warren. After his remarkable overall win at the 2015 USA Championships, Cody stands on the cusp of his pro career, and is eying Olympia qualification next year. Meanwhile, Jay, the four-time Mr. Olympia, is done and dusted with competition. Here he looks back on the sport's premier contest in which he competed 13 times.



WHEN DID YOU FIRST BECOME AWARE OF THE MR. OLYMPIA CONTEST?

When I was 12, back in 1986. One of my elder sister's boyfriends had left a bodybuilding magazine laying around the house. The cover was a shot of Chris Dickerson winning the Mr. Olympia. Like any kid, I admired action figures and super-heroes. I was like, "Wow, that guy looks like Superman. I want to look like that." I told my brother, "I want to lift weights and look like this guy." He said, "You are crazy." That moment was like my first love. I did not start training until many years later, but that was it for me.

"THAT NIGHT WAS THE GREATEST EXPERIENCE OF MY BODYBUILDING CAREER. I FELT TERRIFIC, VINDICATED. I HAD PRODUCED MY BEST-EVER LOOK AND SHUT EVERYBODY UP"

THE FIRST OLYMPIA YOU COMPETED IN WAS 1999. DID YOU ATTEND ANY OLYMPIAS BEFORE THAT?

The 1995 Olympia in Atlanta, Georgia, was the first Olympia I saw and Dorian Yates won his third Sandow. As much negative controversy as he ever got, Dorian totally deserved it. I could not believe how much better he was than everyone else. Nineteen ninety-five was a pretty cool year for me—that was the year I first met Joe Weider in his office.

SPEAKING OF 1995 AND DORIAN, WE DID OUR FIRST INTERVIEW THAT YEAR. YOU'D JUST DONE A GUEST SPOT WITH DORIAN IN HAWAII. I ASKED HIM ABOUT YOU AND HE SAID, "THIS KID'S GOT WHAT IT TAKES TO GET TO THE TOP." YOU WON FOUR OLYMPIAS (2006, 2007, 2009 AND 2010). I THINK YOU SHOULD HAVE WON IN 2001 AND 2005. HOW DO YOU LOOK BACK ON YOUR OLYMPIA CAREER OF FOUR WINS, SIX SEC-ONDS (2001, 2003, 2004, 2005, 2008 AND 2011) AND THREE OTHER PLACINGS?

Those second places made me a star. After controversially losing to Ronnie Coleman in 2001, I was the uncrowned Mr. Olympia to a lot of people. This may sound strange, but going straight to the top is not necessarily the best thing, unless you can actually stay there and you are young enough and good enough to defend it successfully. On the other hand, it was so hard for me to get there, that I really cherished being Mr. Olympia when I finally won. Before I got there, I was ready to create an aura and a mental attitude

SUPERIOR FORMULA. SUPERIOR VALUE.



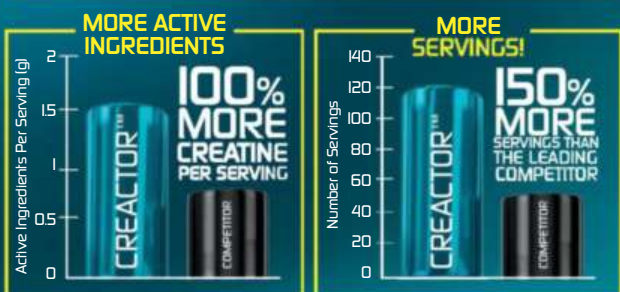
CLINICALLY STUDIED FREE-ACID CREATINE FORMULA

SUPERIOR SCIENCE. SUPERIOR RESULTS.

All-new Creator™ from MuscleTech® is a powerful creatine formula that delivers a never-before-seen ratio of creatine molecules for massive gains in size and strength, and improved recovery. Unlike the other guys, Creator™ delivers a 1:1 ratio of 100% ultra-pure, lab-tested creatine HCl, plus free-acid creatine – the purest form of creatine, free of acids and salts. Plus, there's zero bloating, and you don't need to load or cycle off. For advanced results, get Creator™ today.

- Backed by 2 clinical studies
- Quality guarantee – 100% pure lab-tested, HPLC-certified creatine
- Fully disclosed label – no proprietary blends

CREATOR™ IS SUPERIOR TO THE COMPETITION



MUSCLETECH.COM

1:1 RATIO OF CREATINE

Features a potent combination of 750mg of free-acid creatine and 750mg of creatine HCl.

HIGHEST QUALITY

Contains zero fillers, carbs, sugar or fat.

20% MORE MUSCLE CREATINE

Research published in the *Journal of Applied Physiology* has shown that 3g of creatine per day can boost muscle creatine concentration by 20% in 28 days.

120 SERVINGS

More than double the servings of the competition.

GNC
LIVE WELL



BODYBUILDING.COM

theVitamin
Shopper



LONE STAR
NUTRITION



that gave me the platform to be a great ambassador for the sport. I learned a lot on the way.

EXPAND ON THE EFFECTS OF THOSE SECOND PLACES.

People marvel over the success that I have had, but success does not come from winning and being great all the time. Success is from the failures that I have had in life. It did not come easy for me. I was second to last in my first Olympia [1999]. I was told I was never going to be any good. I did not have the greatest genetics in the world, although I had the genes to get big and have wide shoulders. I did not have the smallest waist and the best structure. I did not have the crazy, round muscle bellies

with the small joints that everyone brags about with certain guys. I was just given the gift of the hard work and a strong sense of discipline. That was taught through my family, my dad, my brothers. They made me get up every morning on the farm and go to work doing work for their concrete company when I was 7 years old. I was bred to work hard. The one thing that I had over everyone else is I always out-worked them. I always trained harder and dieted like a machine. Yes, it did not lead to success and Olympia wins from the get-go. But second-place finishes made me a great champion, and maybe more popular than the reigning champ. When I did win eventually [2006], it was such a big thing, an amazing feeling. And the kicker was, I believe I beat the greatest bodybuilder of all time.

IN 2001, YOU BROKE THROUGH WITH SECOND PLACE AT THE OLYMPIA BUT SHOULD HAVE WON. WE'VE SPOKEN ABOUT IT BEFORE, BUT YOU WERE OK WITH IT?

For me to step up there and challenge the greatest bodybuilder on-stage at that time, I was like ecstatic about it. I was like, "Man, I just placed second at the Olympia." I was so happy. Everyone was saying I got screwed, but I had proved myself to be the reigning Mr. Olympia's biggest threat. I had truly arrived.

IN 2005, WHEN YOU SHOULD HAVE WON, IT WAS A DIFFERENT STORY. I REMEMBER AFTERWARD, YOU WERE JUST SITTING THERE BACKSTAGE ALL ALONE FOR A LONG, LONG TIME. DID THAT SECOND PLACE REALLY GET TO YOU?

Yes, it got me. I really wanted to win that one, and really believed that I could have. I really worked hard to get better that year. I thought for sure I was going to win. It was a tough one as well, because I had so many people telling me, "You have got this, Jay." They asked me to improve to a certain point and I made those improvements, so I thought it I was good enough. I guess I wasn't. It

was not my time. The next year, I knew I was going to win. I had the guy on the ropes and he was not going to beat me this time. It just took a year longer than I wanted it to.

IN FACT, NOW THAT I THINK OF IT, YOU COULD HAVE WON IN 2004 WHEN THE CHALLENGE ROUND DECIDED THE CONTEST. THE VERY LAST POSE WAS BETWEEN YOU AND RONNIE, AND WHOEVER TOOK THAT SHOT WOULD WIN THE CONTEST. RONNIE CALLED FOR THE REAR LAT SPREAD POSE, BUT IN MY OPINION HE PICKED THE WRONG BACK SHOT— HE SHOULD HAVE CALLED REAR DOUBLE BICEPS. YOU'D EVENTUALLY CAUGHT UP WITH HIM ON THE LAT SPREAD, HAVING GAINED WIDTH AND THICKNESS, BUT PROBABLY COULDN'T HANG WITH HIM ON BACK BICEPS, IN WHICH HE HAD MORE DETAIL. WATCHING IT, I THOUGHT, "JAY WON THIS POSE." BUT THEY GAVE IT AND THE SANDOW TO RONNIE.

The Challenge Round was very controversial, and many said at the end they just went for the defending champ.

SO OF ALL 13 OLYMPIAS, WHAT IS YOUR OUTSTANDING MEMORY— I WONDER WHAT IT WILL BE?

You know, it's the 2009 event when after losing to Dexter Jackson, I came back and won my third Sandow. I put everything into that contest, and a good part of the motivation was the disrespect I felt from some members of the press and other self-styled experts, who were saying fourth or fifth was the best I could hope for. That's why in my posing soundtrack, I had a voice-over suddenly interrupt to ask, "Jay, how do you think the press have treated you?" Back came the voice of Rodney Dangerfield, saying, "I don't get no respect." That night was the greatest experience of my bodybuilding career. I felt terrific, vindicated. I had produced my best-ever look and shut everybody up. ■



2004 Mr. Olympia finals



2005 Mr. Olympia finals

"SUCCESS DOES NOT COME FROM WINNING AND BEING GREAT ALL THE TIME. SUCCESS IS FROM THE FAILURES THAT I HAVE HAD IN LIFE. IT DID NOT COME EASY FOR ME."

NEW & EXCLUSIVE PROTEIN INNOVATION

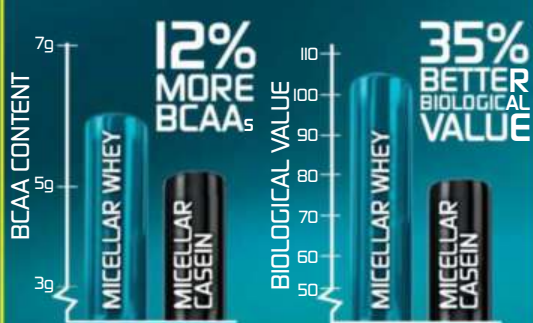
35% BETTER THAN CASEIN

GIVE YOUR CUSTOMERS THE POWER OF 100% WHEY AT THE SPEED OF CASEIN

For years, athletes have trusted micellar casein as a slow-release protein that delivers a sustained release of amino acids for hours. The shortcoming with casein is that it has a lower bioavailability and lower amino acid content than other higher quality proteins, such as whey.

But now, there's a new, breakthrough protein everyone is talking about called micellar whey that uses unique whey protein molecules with double the molecular weight of regular whey molecules, giving it slow-release properties that last for hours. And since it's a whey protein, micellar whey features a 35% better biological value (a form of measuring protein quality) than casein, plus significantly more leucine and BCAAs. Whey and casein are great proteins, but micellar whey is the best of both worlds – it delivers the ultra-superior benefits of whey at the speed of casein!

— SCIENTIFICALLY BETTER THAN CASEIN —



25g PROTEIN

Ultra-pure, patented micellar whey in every scoop.

104 BIOLOGICAL VALUE

35% higher biological value (BV) than casein's BV of 77 for enhanced protein absorption based on scientific literature published in the *Journal of Sports Science & Medicine*.

6-HOUR AMINO ACID DELIVERY

Based on pre-clinical, third-party, in-vitro testing, the unique protein molecule in micellar whey delivers a slow amino acid release.

5.8g BCAAs

Delivers a higher BCAA content than casein, including 2.7g of highly anabolic leucine to stimulate higher protein synthesis.

BETTER TASTE THAN CASEIN

Micellar whey mixes easier than casein for superior taste and less grittiness.

MUSCLETECH.COM

GNC
LIVE WELL

BODYBUILDING.COM

MS

theVitamin Shopper

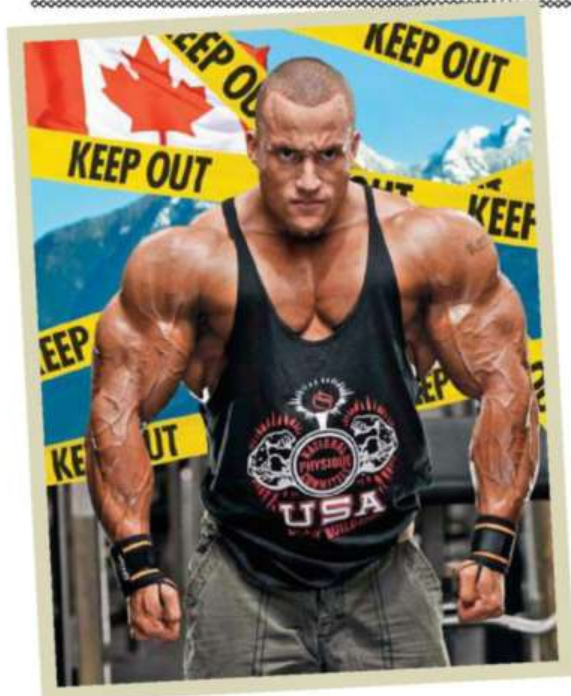
1011

LONE STAR

USA

MUSCLETECH
RESEARCH & DEVELOPMENT

This time of year is always the most exciting for us at Team MD headquarters. Once the excitement of the Olympia is over, we head to follow the European Tour through Madrid, Prague, San Marino and Finland. For now, though, let's talk about what happened in Vancouver at the inaugural Vancouver Pro. For complete contest results, go to musculardevelopment.com.



KEVIN JORDAN DENIED ENTRY INTO CANADA

In what had to be the biggest disappointment of the weekend, Kevin Jordan was denied entry into Canada, leaving us to wonder how he would have fared against Fouad Abiad and Jon De La Rosa. After taking fourth in his pro debut in Chicago, many were expecting him to be right in the mix for a top placing. If you couple this with the fact that he wasn't able to compete in Atlantic City due to prior commitments, this unfortunate turn of events knocked him out of the points race heading into the Olympia. He didn't let this stop him from competing in San Antonio just a few weeks later. He carried on the business of bodybuilding like a trooper.



FOUAD ABIAD TAKES ANOTHER WIN

Many were surprised to see Canadian Fouad Abiad throw his name in the hat when the Vancouver rosters were posted. After all, he was already qualified with a win in Orlando and already prepping for the Olympia. But this season has been full of surprises for Fouad. The first surprise

was when the FIBO Pro Show slated for Germany was canceled just days before the event. Fouad wasted no time and went for the earliest show to replace it. This turned out to be a smart move, as he bested the competition and took the win in Orlando. Arguably, this wasn't the best lineup one could face. Who knows if that factored in to his decision to do another show. At any rate, it proved a safe decision for Fouad, and he can notch another victory on his belt. Weeks later, he would go on to Tampa where he was relegated to second behind Maxx Charles. Not a bad season for Fouad.



SHAUN CLARIDA WINS IN THE 212 DIVISION

IFBB pro Shaun Clarida has been hard at it this year, trying to earn his 212 Showdown qualification, and he finally accomplished that feat in Vancouver. Prior to Vancouver, Shaun took seventh at the New York Pro, and second in both Toronto and Tijuana. In Vancouver, he had the pleasure of stepping onstage and competing against his coach and mentor, "Mountain Dog" John Meadows. No doubt this was a dream come true for Shaun, on many levels. Shaun turned pro at the 2012 NPC Nationals, and then took a year off to grow. Looks like this was a good move for Shaun. In only his second season competing as a pro, he made his way to the 212 Showdown in Vegas.



Have some news we need to know about? We like to keep up with what's going on in every corner of the world. If you've got something for us, send me a message! Email me at adina@musculardevelopment.com.

CREATINE PERFECTED

Super Creatine Complex for Maximum Muscle Saturation

CRE5's advanced proprietary Super Creatine Complex (creatine monohydrate, creatine-HCl, Creatine MagnaPower®, creatine alpha-ketoglutarate and creatine alpha-amino butyrate) is designed for optimal creatine absorption and saturation. CRE5's enhanced absorption will allow you to experience increased muscle building, strength, recovery and performance benefits. In fact, CRE5 is so effective, no creatine loading is necessary. CRE5's Super Creatine Complex also promotes enhanced blood volume and pumps, plus improved pH regulation for increased muscular endurance, performance and muscle building.



- **Increase Muscular Strength & Power • Build Muscle Mass Faster**
- **Enhance Pumps & Cell Volumizing • No Loading Necessary!**
- **Improve Muscle Endurance & Recovery**

CRE5 SUPER CREATINE COMPLEX

- **Creatine Monohydrate** is the most researched creatine and is proven to boost strength and muscle mass.
- **Creatine-AAB** has shown in pre-clinical research to promote up to 5x increase in the synthesis of hemoglobin and red blood cells to support muscle pumps and endurance.
- **Creatine-HCl** enhances creatine solubility and plasma creatine levels for increased power and exercise performance.
- **Creatine MagnaPower®** increases creatine muscle saturation and muscle hydration for greater pumps and cell volume.
- **Creatine-AGK** supports a healthy pH balance, thereby promoting greater muscle power, strength and endurance.



CRE5 ENERGY

Try CRE5 ENERGY for an immediate boost of energy and mental alertness with its Super Creatine Complex and synergistic blend of energizing caffeine, theanine and citicoline for maximum effect!



Available at:



Join
Team
MHP!



facebook.com/TeamMHP
twitter: @MHPStrong
instagram: mhpstrong

1.888.783.8844
MHPSTRONG.com





DANA LINN BAILEY
WWW.RUNEVERYTHINGLABS.COM

RUN
EVERYTHING
FOR THE LOVE OF THE RUN AND THE ROAD



WWW.SPEEDWARHOUSE.COM

FLAG *W* FAIL

DLB BY DANA LINN BAILEY

WHY I DIDN'T DO THE OLYMPIA THIS YEAR

By now, you have all figured out that I decided not to compete in this year's Olympia Women's Physique Showdown. Why not? This was not a very easy decision for me, and there were a lot of considerations that went into this decision. I had to consider what was best for not only myself, but I also have to consider what is best for Rob, our relationship, our business(s), our employees and our future plans. I don't think people realize the magnitude of everything we do, so I thought I owed it to those who wanted to see me onstage in Las Vegas to elaborate just a bit on what the heck do the Baileys really do.

We are essentially running six different businesses right now. Most people know about the clothing company, Flag Nor Fail. We also have the Warhouse Gym, which we run our weekend camps out of. We are also looking into franchising Warhouse Gym. Right now, we are just searching for the right location for the first-ever Warhouse Gym. We also own a car shop, the SPEED WARHOUSE, where we fully fabricate, fully build, pretty much whatever we want and then drive them really fast. This involves us in many car meets, drift events, roll races, autocross and anything wild with cars. We have ONWARD, our supplement that we released just this year. We never intended on doing other supplements, but realized how beneficial it is to create your own formula that works for you. So our newest venture is Run Everything Labs, our supplement company that we're launching at the Olympia Expo. Rob and I will have a RUN EVERYTHING booth that we will be at, meeting people and answering questions. Last but not least, there is Rob's music. If you haven't heard of Rob Bailey and The Hustle Standard, they have four albums out on iTunes. His latest album hit fourth on iTunes for overall sales, and recently their track "Beast" was picked up to be featured on the new film "Southpaw" starring Jake Gyllenhaal. The remix of "Beast" was done by Eminem and featured Rob Bailey, Busta Rhymes, Tech N9ne and Kxng Crooked. And this is just part of the reason we are so busy.

"IT DID NOT FEEL RIGHT TO COMPETE. MY HEART WAS NOT 100 PERCENT, MY HEAD WAS DEFINITELY NOT 100 PERCENT ... AND IF I DO NOT THINK I CAN GIVE IT 100 PERCENT OF MY EFFORT, THEN IT IS NOT WORTH IT."





“LET’S DO SOMETHING WILD, LET’S DO SOMETHING PHYSICAL AND LET’S DO IT TOGETHER. LET’S EXPERIENCE LIFE TOGETHER.”

Then there are the tours. We try to give back to the fans by getting out on the road to places they can see and meet us. A couple of months back, we did a five-day Northeast tour to Mount Washington, New Hampshire. Along the way, we stopped at nutrition stores for appearances to meet people. On the last day, we would end at Mount Washington and hike to the top. But what made this special is that we invited everyone and anyone on our social media to join us and hike together to the top. To our surprise, 60 people showed up at 7:00 a.m. and hiked the tallest mountain in the Northeast USA with us. That gave us an idea for what we’re calling a 30-day “ADVENTURE TOUR” that starts September 7 and will go into October. Rob and I created a bucket list of a bunch of cool things we want to do in different states, and we’re inviting all of our Internet friends to join us. Just as a couple examples, four-wheeling in West Virginia, hiking to the bottom of the Grand Canyon on donkeys, zip-lining in Nashville, murdering food on Bourbon Street in New Orleans, adventures on Lake Mead, surf in Santa Cruz, see the California Redwoods, Camp at Tunnel Falls in Oregon, drive on Going-to-the-Sun Road in Glacier National Park, white-water rafting in Montana, and mountain biking in the Badlands, just to name some of the wildness adventures we are planning. Part of the

tour will also include the full three days at the Olympia Expos at our RUN EVERYTHING booth. The greatest part is, we are inviting the world to join us on our adventures. After our experience on the Mount Washington trip, we decided we needed to do this more. Going to expos is great, but it is not the experience that I want to have with people. Standing in line for hours in a crowded expo to come and meet me for about two minutes just doesn’t seem fun and it doesn’t seem right. Instead, let’s do something wild, let’s do something physical and let’s do it together. Let’s experience life together. Now, instead of standing in line for four hours to meet me for two minutes ... we will conquer life for hours together! This is the experience I want to have with people.

As much as I love competing, I have to keep it in perspective. Competing takes me away from all these things I stated above. When I compete, everything is based around my eating schedule and training schedule. For me to look like I do onstage, it takes everything. It distracts me from my business and distracts me from my husband and family, and it distracts me from living life.

And to be honest, I was just plain tired. My



body and my mind both needed a break. I just wasn't ready to get back on the horse again. I think it was nearly summer when I got an email from Robin Chang. He said he had not received my letter of intent to compete in the Olympia yet, which caught me off guard because I hadn't even realized it was already that time of year. I was just returning home from god-knows-where and hadn't even begun to think about Olympia, but I had to turn in my signed contract the next day. June 1st is usually when I start my prep for the Olympia and I wasn't excited about it, which was a clear signal to me that I shouldn't do it. I don't force myself to do anything if it doesn't feel right. At that moment, it did not feel right to compete. My heart was not 100 percent, my head was definitely not 100 percent ... and if I do not think I can give it 100 percent of my effort, then it is not worth it.

This past year really kicked my ass. On June 1st, I had started my prep for the 2014 Olympia. So after I had competed in the biggest show of the year and of my life, what do I do? We go on two-week PORSCHE TOUR, driving from Las Vegas to North Carolina, where Rob's brother, Drew, was getting married. Every day, we were in a different state for an appearance. What we didn't realize was the enormous amount of people who would show up to each stop. The first stop was a gym in Phoenix, where there were about 500-600 people waiting for us. We knew we were in some trouble because if everyone knows us, we stay until we meet every last person—so we were staying and taking pictures with people sometimes till 2 or 3 a.m., then having six to eight hours of driving to do to get to the next location. So there was no sightseeing, not much eating, barely any sleeping and definitely no training ... just driving and hoping not to show up too late to the next location, and try and give the fans that came out to see us 100 percent of our energy and the best experience that we could.

Once the PORSCHE TOUR was over, it was back to business. Every weekend was a guest posing, an event appearance or a Warhouse camp. During the week, we worked on Flag Nor Fail and planned for whatever it was we were doing the following weekend. Then on December 1st it was right back into prep for the 2015 Arnold Classic, the second biggest show of the year and of my life! So I was in prep mode from December to March. We left for the Arnold on March 2nd, I competed and then I didn't return again until April. From the Arnold Classic in Ohio, we went directly to the Arnold Classic in Australia, then to Texas for the TX2K car event, where we unveiled our VIPRA (Supra + V-10), back to Ohio for guest posing, to Denmark, to the U.K., etc. ... and it was basically like that from March to June— and then in June, I would have had to start prepping again.

So with everything going on in our lives, it just didn't seem appropriate or wise to throw myself right back into a prep. Time to give myself, my body and my head a little break for now. I owe it to myself, I owe it to Rob, I owe it to my family and I owe it to my employees to make the right decision for everyone.

I am definitely going to be upset that I am not onstage this year. I am going to miss performing my routine— it



“THERE IS SOMETHING ABOUT THE STAGE THAT IS SO INTRIGUING TO ME. WE TORTURE OURSELVES FOR FOUR MONTHS FOR ABOUT THREE MINUTES OF GLORY ... BUT SOMEHOW IT IS WORTH IT.”

is what I look forward to the most! There is something about the stage that is so intriguing to me. We torture ourselves for four months for about three minutes of glory ... but somehow it is worth it. How I feel when I am onstage performing makes it all worth it! It feels weird to say I am not competing this year. I am a competitor—that is what I do, that is who I am, so it does feel a little bit weird. But sometimes the best decisions can be weird. So thank you all for your understanding and support, and don't worry ... DLB WILL BE BACK!!! I can't think too far ahead to say what my next contest will be ... BUT I will be back onstage, and it will only be that much more exciting!!!!

Thank you for reading, and hope to see some of you on the ADVENTURE TOUR and at the Olympia!

Check Out DLB Online

www.flagnorfail.com
www.danalinnbailey.com
www.thewarhousegym.com
www.whateveryourworkmaybe.com

Social Media

Facebook: Dana Linn Bailey
 Instagram: @danalinnbailey
 Twitter: @daydayknucks

RUN
EVERYTHING

DANA LINN BAILEY
WWW.RUNEVERYTHINGLABS.COM

KE HISTORY FLA



BY ADINA ZANOLLI

It's time to take another look at what's happening at www.musculardevelopment.com, where we pride ourselves on adding new content every day! We've got a few things future-dated, such as a video series with Team GAT's Kevin Jordan, but here's what's happening now.

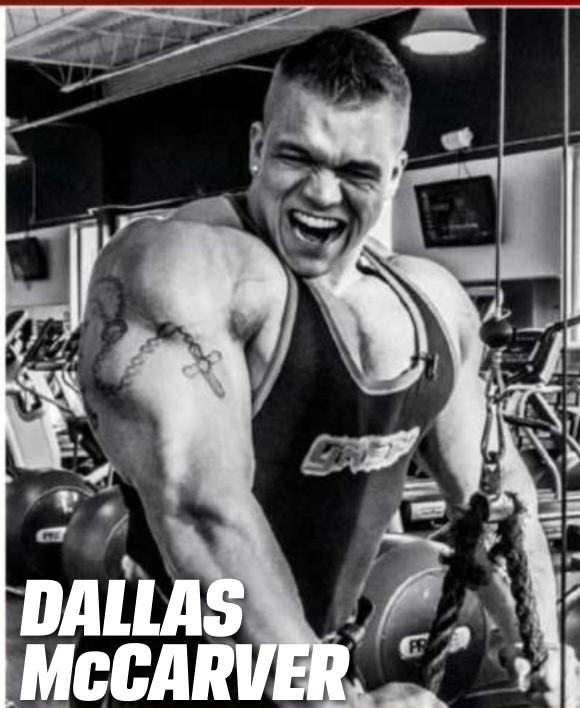
CONTEST PICTURES GALORE



The 2015 contest season is coming to a close, but those contest pictures are there to stay. If you're behind a few shows, you'll want to check out the shows you've missed. The most recent shows are always listed on the main page. Once a show drops off the main page, you can search for the show by name, or pick a competitor and search for them. To find the main page, just click on the CONTESTS tab on the home page.

FURIOUS PETE BATTLES CANCER

If you're a fan of Furious Pete, you probably already know he's on his second battle of a lifetime with cancer. We're following along on his YouTube channel and leaving best wishes for him at the MD forums. Stop by to let him know you're pulling for him. If you know someone in the same situation, point them in Pete's direction. He's sharing everything he's going through, from start to finish. Everyone at Team MD is wishing him well.



DALLAS MCCARVER ON THE NO BULL FORUMS

Have a question for Dallas McCarver? If you do, come to the No Bull Forums. He is definitely around to answer them for you. In my watch, I've not seen many put as much effort into being available as Dallas is for his fans. Whatever his next move is, we'll be following his progress all along the way. In the era where athlete contracts appear to be going extinct, Dallas appears to be showing why he's a good one to keep on board!

PETER MCGOUGH TALKS TO IFBB PRO EDDIE ROBINSON

If you've been a bodybuilding fan for a while, you'll want to be sure to check out the latest from Peter McGough. We were all delighted to see IFBB pro Eddie Robinson make an appearance at the Tampa Pro this year. If you wonder what he's been up to, wonder no more! Peter sat down with Eddie and asked all the important questions, including just exactly why he retired and what's he been up to lately. Speaking of retired pros, check out the Tampa Pro contest gallery while you're at it. Vince Taylor was presented with the Ben Weider Lifetime Achievement Award at the show. Add in that Lenda Murray and Dayana Cadeau were there, and you can see it was a good weekend for retired pro sightings!



SHOULD WE PERISCOPE?

Just when you think you're on top of social media, a new format comes along. Periscope is the most recent one we're considering adding to our social arsenal. Do you like it, love it or hate it? Would you like to see Team MD jump in this pool? Give us your thoughts.

Don't forget, we're always looking for gyms to visit and athletes to film. If you go to a great gym, or know of an athlete we need to feature, shoot me a message. Email me at adina@musculardevelopment.com.

MULTI-PHASE PRE-WORKOUT

ION

MAXIMUM PUMP TECHNOLOGY^{1A}

BALLISTIC MUSCLE ENERGY¹

ENHANCED MENTAL FOCUS¹



P E R F O R M I X™

GNC
LIVE WELL

B BODYBUILDING.COM™

f t i /PERFORMIXDRIVEN

^{1A} When used in conjunction with a regular exercise program.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

Arterial Stiffness Greatest Following Upper-Body Exercise

ARTERIAL STIFFNESS DECREASES THE CAPACITY OF BLOOD VESSELS TO CONTROL BLOOD FLOW, INCREASES BLOOD PRESSURE AND OVERLOADS THE HEART. Arterial stiffening is linked to poor metabolic health and the metabolic syndrome—a group of health problems related to heart disease and stroke that include high blood pressure, insulin resistance, type 2 diabetes, abnormal blood fats and abdominal obesity. Weight training can also increase arterial stiffness. A study from the University of Basel in Switzerland found that arterial stiffness was greater following upper-body weight training compared to lower-body or whole-body weight training. Upper-body exercise places a greater load on the heart and blood vessels because they overload relatively small muscles. Other studies have shown that aerobic exercise following weight training can override the negative effects of weight training on arterial stiffness. Bodybuilders and other weight-trained athletes should finish workouts with at least some aerobic exercise to prevent blood vessel stiffening and high blood pressure. (International Journal Sports Medicine, published online July 15, 2015)



HEAVY-LOAD SQUATS

Recruit More Motor Units Than Light-Load Squats to Failure

MOTOR UNITS ARE TRAINED IN DIRECT PROPORTION TO THEIR RECRUITMENT (ACTIVATION). Bill Kraemer and colleagues from The Ohio State University found that motor unit activation, as measured by peak EMG amplitude, was greatest when training at 90 percent of one-repetition maximum (1RM) to failure, compared to training at 70 percent or 50 percent of 1RM to failure. Maximize strength and hypertrophy by using heavier loads. This is important information for bodybuilders and power athletes. (Journal Strength Conditioning Research, published online August 10, 2015)



HIIT Improves Performance and Lowers Blood Pressure

HIGH-INTENSITY INTERVAL TRAINING (HIIT) IMPROVES FITNESS MORE RAPIDLY THAN TRADITIONAL AEROBICS. Many people have trouble sticking to a HIIT program because of its high intensity. Researchers from the University of Copenhagen in Denmark, led by Jens Bangsbo, found that 10-20-30 training—repeated bouts of 30 seconds of easy exercise, followed by 20 seconds of moderate-intensity exercise, followed by 10 seconds of intense exercise—improved 5K running performance, reduced blood pressure, increased maximal oxygen consumption and reduced vascular endothelial growth factor (a measure of blood vessel disease). Test subjects were able to sustain 10-20-30 training during the eight-week training program because it only involved 10-second periods of intense exercise rather than longer, intense intervals. (Scandinavian Journal Medicine Science Sports, published online December 1, 2014)

Palm Heating and Cooling Between Sets Delays Fatigue

ATHLETES WHO PUSH HARDEST FOR THE LONGEST TIME GAIN THE MOST MUSCLE MASS AND STRENGTH. The process is self-limiting—intense training increases muscle temperatures, which interfere with energy reactions and causes fatigue. Young Kwon from Humboldt State University in California, and colleagues, in a study on college-aged women, found that increasing or decreasing palm temperature between sets delayed fatigue during a weight-training workout and improved total exercise volume by almost 10 percent. Researchers heated and cooled the palm using a rapid thermal exchange device called “the glove” (AVAcure Technologies, Palo Alto), developed by scientists from the biology department at Stanford University in California. The device cools the muscles rapidly during rest intervals without triggering a general body alarm that prevents sudden heat loss. (Journal Strength Conditioning Research, 29: 2261-2269, 2015)

TERRA INTELLIGENT DOSING™ SUPER THERMO

SST

BALLISTIC BODY ENERGY™

FAT METABOLISM™

ENHANCED MENTAL FOCUS†



PERFORMIX™

GNC
LIVE WELL

B BODYBUILDING.COM™

f t i /PERFORMIXDRIVEN

*When used in conjunction with a regular exercise program.
†These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

SUBSCRIBE NOW!



SAVE 25%

ON A 2-YEAR SUBSCRIPTION!

24 ISSUES for \$59.97
(THAT'S JUST \$29.98 A YEAR!)

Use Coupon Code "MD1015"

HURRY! Offer expires Oct. 31st, 2015

CALL 1-800-653-1151

OR ORDER ONLINE

WWW.MUSCULARDEVELOPMENT.COM

OFFER VALID ON A TWO YEAR SUBSCRIPTION ONLY
OFFER EXCLUDES FOREIGN SUBSCRIPTION RATES
FOREIGN SUBSCRIPTION RATES (INCLUDING CANADA)
ARE \$79.97 FOR ONE YEAR

DOES ICE SPEED POST-EXERCISE HEALING?

THE RICE PRINCIPLE—REST, ICE, COMPRESSION AND ELEVATION—HAS BEEN THE CORNERSTONE OF ATHLETIC INJURY MANAGEMENT FOR THE PAST 40 YEARS. A study by scientists from Taiwan and the opinions of several leading orthopedic specialists have cast doubt on this treatment method. The Taiwanese study induced muscle damage using eccentric muscle contractions of the elbow extensors, and then applied ice for 15 minutes at zero, three, 24, 48 and 72 hours after exercise. Compared to a control group, post-exercise icing caused greater fatigue and soreness. Ice had no effect on immune system function. Before we toss out the baby with the ice water, this was a small study that used an isolated muscle group. Also, there were no differences in strength between the ice and control groups. A built-in bias in the study is the difficulty of finding a true control group for ice. We need more research before we take the "I" out of RICE. (Journal Strength Conditioning Research, 27:1354-1361, 2013)

HIIT Reduces Liver Fat and Improves Body Composition in Fatty Liver Disease

FATTY LIVER DISEASE INVOLVES FAT ACCUMULATION IN LIVER CELLS DUE TO EXCESSIVE ALCOHOL INTAKE, THE METABOLIC SYNDROME OR OBESITY. The metabolic syndrome is a collection of symptoms that include insulin resistance, abdominal fat deposition, high blood pressure, abnormal blood fats and type 2 diabetes. Fatty liver disease is reversible with lifestyle modification. Researchers from Newcastle University in the United Kingdom found that high-intensity interval training (HIIT) decreased liver fat, total body fat and improved liver enzyme levels in middle-aged patients. It also increased aerobic capacity. HIIT improves physical fitness rapidly and enhances metabolic health. (Clinical Science (London), published online August 11, 2015)

Similar Fitness Gains From Long and Short Rowing Intervals

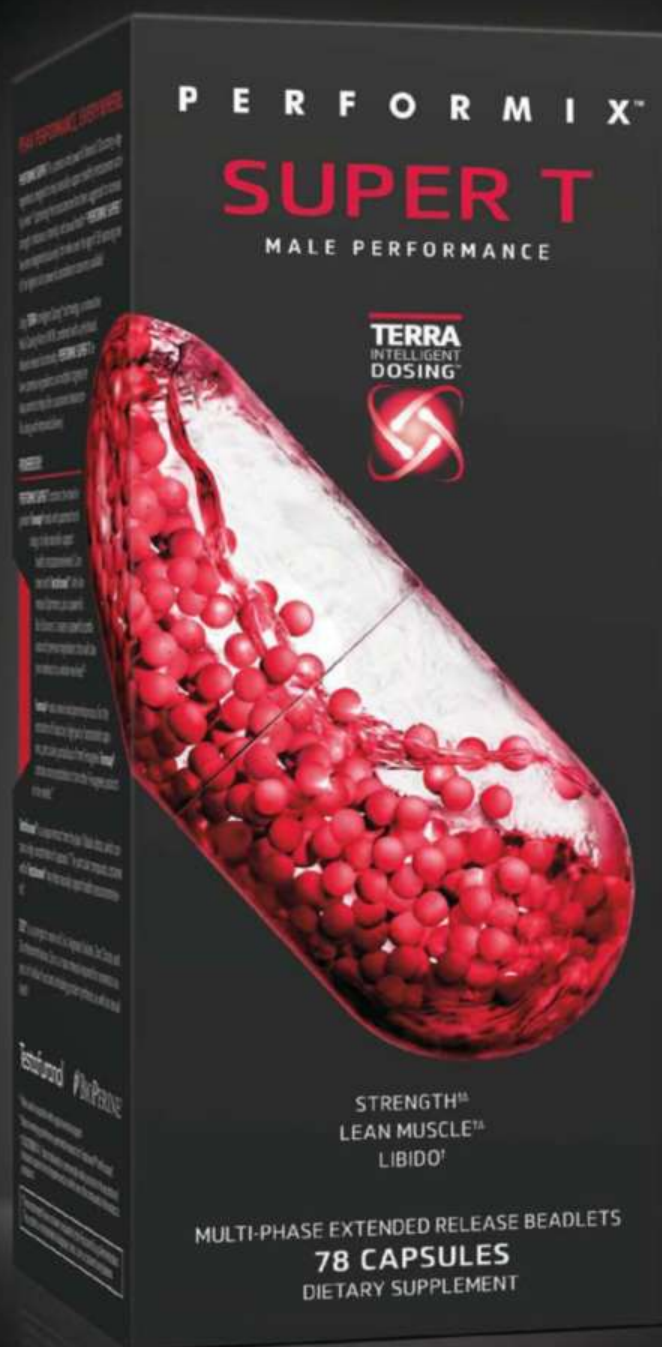
ROGER BANNISTER BROKE THE FOUR-MINUTE MILE IN 1954 BY RUNNING FOUR HALF-MILE RUNS AT MAXIMUM SPEED DURING HIS LUNCH HOUR WHILE A STUDENT IN MEDICAL SCHOOL. More recent studies on interval training showed remarkable improvements in fitness using intervals lasting from 30 seconds to four minutes. Researchers from Ankara University in Turkey found that rowers using intervals of 2.5 minutes gained fitness as well as those practicing 30-second intervals at a higher intensity. A variety of training intensities are effective for high-intensity interval training (HIIT). (Journal Strength Conditioning Research, 29: 2249-2254, 2015)

WEIGHT TRAINING ENHANCES Cell Mitochondria

THE MITOCHONDRIA ARE THE POWER-HOUSES OF THE CELL. Loss of mitochondria is associated with poor metabolic health and premature death. Aerobic exercise is the best way to increase the number of mitochondria and their function. Craig Porter from the Shriners Hospitals for Children in Galveston, Texas and co-workers found that weight training also improves mitochondrial function. Eleven young men who trained with weights for 12 weeks showed improvements in important mitochondrial chemicals and in mitochondrial gene activity. These results may be particularly important in older adults. People lose muscle mass and mitochondrial function as they age. Including weight training in the exercise program could help preserve muscle mass and enhance mitochondrial capacity. (Medicine Science Sports Exercise, 47: 1922-1931, 2015)



PERFORMIX™



GNC
LIVE WELL

B BODYBUILDING.COM™

f t i /PERFORMIXDRIVEN

[^]When used in conjunction with a regular exercise program.

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.



HIGH SALT INTAKE Linked to Obesity

HIGH SALT INTAKE IS LINKED TO OBESITY THROUGH INCREASED CONSUMPTION OF SUGAR-SWEETENED DRINKS. Feng He and colleagues from the London School of Medicine and Dentistry found that high salt intake was also independently related to elevated body fat in children and adults. They assessed sodium levels from 24-hour urine collections in more than 1,000 children and adults gathered as part of the U.K.'s National Diet and Nutrition Survey. Salt intake was highest in obese people. The risk of obesity increased 28 percent for each gram of sodium consumed above average values. (Hypertension, published online August 3, 2015)



Does **SKIPPING BREAKFAST** Cause Weight Gain?

THE U.S. DIETARY GUIDELINES RECOMMEND EATING BREAKFAST EVERY DAY TO PREVENT WEIGHT GAIN. It turns out that the recommendation was based on observational studies rather than well-structured experiments. In observational studies, scientists observe subjects and measure variables of interest without assigning them treatments. A Columbia University study comparing people who ate no breakfast, oatmeal or frosted flakes showed that skipping breakfast triggered weight loss during a four-week study, while breakfast eaters experienced no change. Eating breakfast has other advantages such as providing fuel for morning activities and increasing total daily fiber intake. (Obesity, published online September 6, 2012; The Washington Post, August 10, 2015)



SLEEP DEPRIVATION Increases Obesity Risk

LACK OF SLEEP DISRUPTS ENERGY BALANCE, WHICH DETERMINES WHETHER YOU GAIN WEIGHT, LOSE WEIGHT OR STAY THE SAME—ACCORDING TO A LITERATURE REVIEW AND META-ANALYSIS CONDUCTED BY DAVID ALLISON AND COLLEAGUES FROM THE UNIVERSITY OF ALABAMA AT BIRMINGHAM. Sleep deprivation increases a hormone called ghrelin, which promotes appetite. It also reduces leptin, a hormone that normally suppresses appetite. Some studies have found that inadequate sleep increased the risk of obesity by 200 percent. Inadequate sleep was also linked to diabetes and high blood pressure. Sleep disturbances are surprisingly common in children and adults and can cause serious health problems, such as memory loss, coronary artery disease, stroke and daytime sleepiness—and contribute to automobile and workplace accidents. See your physician for a sleep study if you have insomnia, snore loudly, stop breathing for 20 seconds or more during sleep or wake frequently at night. (Obesity Reviews, 16: 771-782, 2015)

TESTOSTERONE Is Important for Body Composition Control

TESTOSTERONE IS AN IMPORTANT HORMONE FOR CONTROLLING OBESITY. Low testosterone levels are linked to increased total body fat, abdominal fat deposition and reduced muscle mass—according to a literature review by British researchers. These changes in body composition are linked to energy imbalance, impaired blood sugar control, decreased insulin sensitivity and abnormal blood fats. Testosterone replacement therapy helps restore normal body composition and improves motivation, energy levels and vigor, which enable men to lead more active lifestyles. (Obesity Reviews, 16: 581-606, 2015)



NEW PRODUCT

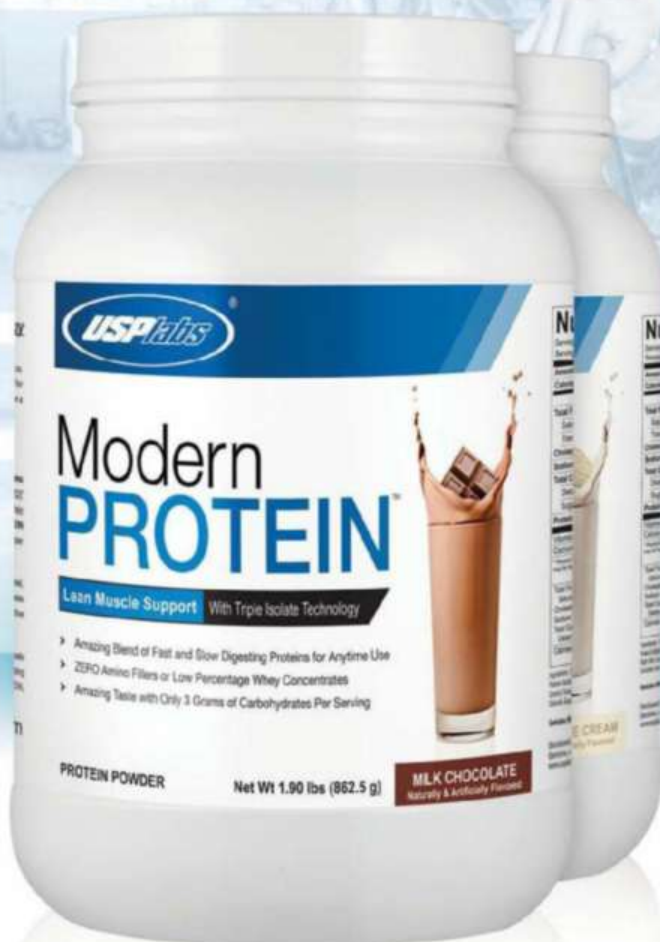
Modern PROTEIN™

WITH TRIPLE ISOLATE TECHNOLOGY

NO AMINO SPIKING!

23 GRAMS OF 100% REAL PROTEIN

ModernPROTEIN™ does not contain any Amino Fillers - meaning absolutely no "Protein Spiking" or "Amino Spiking".



A HIGH QUALITY BLEND OF
PREMIUM ISOLATE PROTEINS

MILK PROTEIN
ISOLATE

WHEY PROTEIN
ISOLATE

HYDROLYZED WHEY
PROTEIN ISOLATE

Milk Protein Isolate

A premium protein source
that contains faster absorbing
whey protein and slower
absorbing casein protein.

**Whey Protein Isolate
and Hydrolyzed Whey
Protein Isolate**

Are High Quality and Fast
Absorbing Protein Sources.

23

GRAMS
OF PROTEIN

3X

ISOLATE
PROTEIN SOURCES

0

AMINO
FILLERS



www.USPLabsDirect.com



Copyright USP Labs, LLC. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease. Information in this ad should not be used as an indication or predictor of your individual results. These products are meant to be used in conjunction with a proper nutrition & exercise program. Your results are completely dependent upon the amount of effort you put into it, which includes eating & exercising properly. You should consult your healthcare practitioner before beginning any such plan. All examples are for illustrative purposes only. USP Labs is not affiliated with, and its products are not endorsed by, the United States Pharmacopeia, Rockville, MD. Endorsers began their relationships with USP Labs as product users before endorsing the company. USP Labs Endorsers may have been remunerated for their endorsement.

Jordan Williams // TEAM USPLABS ATHLETE™

*USP Labs Endorsers may have been remunerated for their endorsement.



THIS IS PROTEIN



**87%
PROTEIN
RATIO***

ZERO ▶ concentrates
▶ creamers
▶ spiking
▶ gums

*Depending on Flavor

Get Your Sample Pack Today!
ruleoneproteins.com



FAT LOSS CUTTING-EDGE RESEARCH

Fatherhood Makes You Fat

BODY MASS INDEX IS A MEASURE OF THE PROPORTION OF WEIGHT TO HEIGHT (BMI= WEIGHT ÷ HEIGHT²) AND IS A ROUGH MEASURE OF BODY COMPOSITION AND OBESITY. Becoming a father increases BMI, regardless of whether the father lives with the child— according to a study led by Craig Garfield from the Northwestern University Feinberg School of Medicine in Chicago. Over time, non-fathers decreased BMI. Researchers studied more than 10,000 men over a 20-year period. Fatherhood could increase the risk of diabetes, cardiovascular disease and premature death. (American Journal of Men's Health, published online July 21, 2015)

CAFFEINE AND ALBUTEROL *Decrease Fat and Build Muscle*

THE COMBINATION OF CAFFEINE AND ALBUTEROL REDUCES BODY FAT AND INCREASES LEAN BODY MASS— ACCORDING TO A STUDY FROM THE PENNINGTON BIOMEDICAL RESEARCH CENTER IN BATON ROUGE, LOUISIANA. Their conclusions were based on a series of studies using cultured fat cells, rats and humans. In humans, the two drugs increased resting metabolic rate. The combination of drugs had a greater effect than either drug alone. The purpose of this study was to explore alternatives to caffeine and ephedra, which were removed from the market by the U.S. Food and Drug Administration (FDA). (Obesity, published online August 4, 2015)



Fat Burning Greatest After an Overnight Fast

EXERCISING FOLLOWING AN OVERNIGHT FAST WILL BURN MORE FAT THAN EXERCISING AFTER BREAKFAST, ACCORDING TO KOREAN RESEARCHERS. Test subjects reported to the laboratory for a 30-minute treadmill run, either fasted or after breakfast. When fasted, blood sugar was lower and free fatty acids, growth hormone and cortisol were higher than when the subjects ate breakfast. Consistently exercising while fasted in the morning should result in greater fat burning and fat loss than exercising after breakfast. (Journal of Physical Therapy Science, 27:1929-1932, 2015)

EXERCISE MIGHT ACTIVATE BROWN FAT

THE HUMAN BODY CONTAINS SMALL AMOUNTS OF A CALORIE-BURNING TISSUE CALLED BROWN FAT (BROWN ADIPOSE TISSUE, BAT) THAT CONVERTS FOOD ENERGY DIRECTLY INTO HEAT. White fat does the opposite— it stores energy. BAT promotes non-shivering thermogenesis, which generates heat and helps animals and humans adapt to the cold. Exercise might activate BAT— according to researchers from the University of Granada in Spain. BAT is turned on by the sympathetic nervous system, which is the body's fight-or-flight system for coping with exercise, stress and emergencies. Increasing brown fat activation helps people expend more calories and burn more fat. Individual differences in BAT content and activity plays an important role in human obesity. (Annals of Nutrition & Metabolism, 67:21-32, 2015)

THIS IS PRO TEIN

If there's 1 thing that can improve any muscle group, it's high-quality protein. And the fact that our 87% protein per serving pretty much crushes the top proteins on the market, we're simply stating a fact when we say "This is the 1." R1 Protein™



ZERO ✓ concentrates
✓ creamers
✓ spiking
✓ gums

*Depending on Flavor

Get your free sample of R1 Protein™ today • ruleoneproteins.com • 1-888-982-9290

Eating Protein and Vegetables Before Carbs Promotes Blood Sugar Regulation

EATING VEGETABLES AND PROTEIN BEFORE CARBOHYDRATES RESULTED IN LOWER POST-MEAL BLOOD SUGAR LEVELS IN OVERWEIGHT PEOPLE WITH TYPE 2 DIABETES— ACCORDING TO A STUDY LED BY LOUIS ARONNE FROM WEILL CORNELL MEDICAL COLLEGE IN NEW YORK CITY. Preventing spikes in blood sugar in diabetics is important for preventing blood vessel disease that can lead to heart attack. It is also important in athletes. Maintaining stable blood sugar helps prevent major shifts in energy levels and reduces fat deposition. A simple way of preventing blood glucose spikes is to consume your protein shake at the beginning of a meal. This will turn on biochemical pathways that promote muscle protein synthesis and prevent rapid increases in blood sugar. (Diabetes Care, 38: e98-e99, 2015)



GINGER PREVENTS POST-EXERCISE MUSCLE SORENESS AND INFLAMMATION

INCREASING GINGER CONSUMPTION MIGHT PROMOTE RECOVERY FROM INTENSE WEIGHT TRAINING INVOLVING ECCENTRIC MUSCLE CONTRACTIONS (LENGTHENING CONTRACTIONS OR NEGATIVES), AND REDUCE INFLAMMATION FOLLOWING INTENSE ENDURANCE EXERCISE— ACCORDING TO A LITERATURE REVIEW BY PATRICK WILSON FROM THE UNIVERSITY OF NEBRASKA, LINCOLN. An analysis of seven studies showed that consuming two grams of ginger per day will help relieve post-exercise muscle soreness and promote recovery. Ginger has no effect on body composition, metabolic rate, muscle strength or perceived exertion during exercise. It is not clear whether these results apply to long-term use in accomplished athletes. (Journal Strength Conditioning Research, published online July 11, 2015)



Nutritional Antioxidants Promote Healthy Testosterone Metabolism

TESTOSTERONE IS PRODUCED IN THE LEYDIG CELLS OF THE TESTES. These cells are subject to increased oxidative stress during the aging process, which can impair testosterone production. The cells produce highly reactive free radicals during metabolism that destroy cell membranes and DNA, disrupt cell function and hamper the immune system. A review of literature by Michael Glade and co-workers from Hawaii concluded that reducing oxidative stress through diet and possibly supplements might decrease stress on the Leydig cells and enhance testosterone metabolism. (Nutrition, published online June 19, 2015)

Beta-Alanine Supplements Increase Muscle Endurance

BETA-ALANINE INCREASED AVERAGE JUMP HEIGHT DURING REPEATED PLYOMETRIC SQUAT JUMPS— ACCORDING TO A STUDY FROM THE FREE UNIVERSITY OF BRUSSELS IN BELGIUM. Alanine is an amino acid that helps supply energy during exercise. It is converted to blood sugar in the liver by a process called the glucose-alanine cycle. While it is not used to synthesize muscle tissue or enzymes, it influences exercise capacity— particularly endurance performance. Alanine prevents fatigue by increasing tissue carnosine levels. Carnosine is an important antioxidant that protects cells from destruction and buffers acids that cause fatigue. Other studies have found that alanine boosts weight-training endurance. The effective dose for alanine is about four to six grams per day. This supplement might have a small effect on increasing training stamina in the weight room. (Amino Acids, 47:1479-1483, 2015)



Carbohydrate Consumption Improves Performance During Stop-and-Start Sports

CARBOHYDRATE IS THE PRINCIPAL FUEL DURING EXERCISE AT INTENSITIES ABOVE 65 PERCENT OF MAXIMUM EFFORT. Total carbohydrate stores in the muscles and liver amount to about 400 grams, which can be depleted rapidly—particularly during weeks of heavy training or competition. Carbohydrate consumption is essential during prolonged, intermittent exercise. A review of literature by Lindsay Baker from the Gatorade Sports Science Institute in Barrington, Illinois and co-workers concluded that carbohydrate ingestion before or during games or practice has the greatest effect on performance toward the end of exercise. Optimal carbohydrate intake is approximately 30 to 60 grams per hour, consumed as a six or seven percent solution (six or seven grams of carbohydrate per 100 milliliters of water) composed of sucrose, glucose or maltodextrin. (Nutrients, 7: 5733-5763, 2015)



Weight Training Plus Dairy Foods Prevent Muscle Loss

WEIGHT TRAINING PLUS DAIRY SUPPLEMENTS DECREASED BODY FAT IN MEN SUFFERING FROM SARCOPENIA— ACCORDING TO RESEARCHERS FROM THE SOCIAL SERVICES AND HEALTH CENTER-UNIVERSITY INSTITUTE OF GERIATRICS OF SHERBROOKE IN QUEBEC, CANADA. The men ate normally and did not try to cut calories. There were no changes in muscle mass, resting metabolic rate, inflammation and hormones controlling appetite. Sarcopenia, which is the loss of muscle tissue, is a serious problem in aging adults. It causes loss of mobility, increases the risk of falling, impairs the ability to control blood sugar and promotes obesity. Combining weight training with dairy consumption is a simple way to decrease body fat while maintaining muscle mass. (International Journal Sports Nutrition Exercise Metabolism, published online august 3, 2015)

MANAGING CARB INTAKE

NUTRITIONISTS FROM AROUND THE WORLD ISSUED GUIDELINES FOR CARBOHYDRATE INTAKE AT THE INTERNATIONAL CARBOHYDRATE QUALITY CONSORTIUM. PEOPLE SHOULD AVOID LARGE SPIKES IN BLOOD SUGAR BY EATING MORE COMPLEX CARBOHYDRATES, PROTEINS AND FATS. Complex carbohydrates are digested slowly. The glycemic index, the rate that a food increases blood sugar, is an important and consistent measure of the blood sugar load from a meal. Consuming low-glycemic index meals is particularly important for people with type 2 diabetes and insulin resistance. Consistently consuming these meals will reduce the risk of type 2 diabetes. Low-glycemic index foods are typically higher in fiber, which is important for blood cholesterol regulation, digestion and gastrointestinal health. Consuming low-glycemic index meals is particularly important for sedentary people. Consistently eating more complex carbohydrates may reduce the risk of coronary artery disease, improve blood fats and reduce whole-body inflammation. (Nutrition, Metabolism & Cardiovascular Diseases 25: 795-815, 2015)

Is Dietary Cholesterol Important?

THE 2015 U.S. DEPARTMENT OF AGRICULTURE DIETARY GUIDELINES FOR AMERICANS STATED, "CHOLESTEROL IS NOT CONSIDERED A NUTRIENT OF CONCERN FOR OVERCONSUMPTION." Large population studies such as the Framingham Heart Study and the Seven Countries Study showed a direct link between blood cholesterol levels and coronary artery disease. However, there is a low relationship between dietary cholesterol and blood cholesterol. The source of blood cholesterol largely comes from the liver. However, people with type 2 diabetes absorbed more cholesterol in the intestines, so they should limit dietary cholesterol intake. For most people, the role of dietary cholesterol in promoting heart disease is not fully understood. Dietary cholesterol intake appears less important in people consuming a healthy diet. (American Journal of Clinical Nutrition, 102:235-236, 2015; 102:276-294, 2015)

THIS IS PROTEIN



**87%
PROTEIN
RATIO***

ZERO ▶ concentrates
▶ creamers
▶ spiking
▶ gums

*Depending on Flavor

COCA-COLA FUNDS OBESITY GROUP *Promoting Exercise Over Diet*

PHYSICAL INACTIVITY PROMOTES OBESITY AND POOR METABOLIC HEALTH THAT CAN LEAD TO PREMATURE DEATH, HEART DISEASE AND DIABETES. Large population studies by researchers such as Stephen Blair have shown that physical fitness and regular exercise are more important for health than low body fat. Coca-Cola is funding the Global Energy Balance Network to promote this point of view. They donated \$1.5 billion to start the organization. Their position is that physical inactivity rather than fast food and sugary drinks is the key to health and obesity prevention. Coke has a vested interest in this position. Scientists from the group claimed that Coke has no control over their activities. They are distinguished researchers with a long history of credible research. (The New York Times, August 9, 2015)



THE PSYCHOLOGY OF SELFIES

SELFIE STICKS ARE THE ULTIMATE SYMBOLS OF NARCISSISM. Some psychologists have gone so far as to say that selfie stick users have narcissistic, psychopathic and Machiavellian personality traits. They have increased needs for self-gratification, particularly when they post their photos online. Frequent selfie stick users are insecure and score lower on measures of belonging and meaningful existence. These are the same people who get upset when they don't get "likes" on their Facebook entries. Other psychologists contend that selfies are just another form of communication. It's predictable that selfies would become fertile ground for psychobabble. (The New York Times, August 8, 2015)



Ibuprofen and Acetaminophen Inhibit Muscle Protein Synthesis

INTENSE WEIGHT TRAINING OFTEN LEAVES ATHLETES WITH SORE JOINTS AND MUSCLES. Many take drugs like ibuprofen and acetaminophen to cut the pain. This is a mistake. A study led by Todd Trapp and Eileen Weinheimer from Ball State University in Muncie, Indiana found that both drugs inhibited protein synthesis after weight training. These drugs block the production of cyclooxygenase (COX), which stimulates the production of inflammatory chemicals called prostaglandins. Inflammation is painful, but it is the body's way of coping with cell injury and irritation. Some inflammation appears critical for promoting protein synthesis following weight training. Bodybuilders should minimize the use of ibuprofen and acetaminophen. (American Journal of Physiology Regulatory, Integrative and Comparative Physiology, 292: R2241- R2248, 2007)

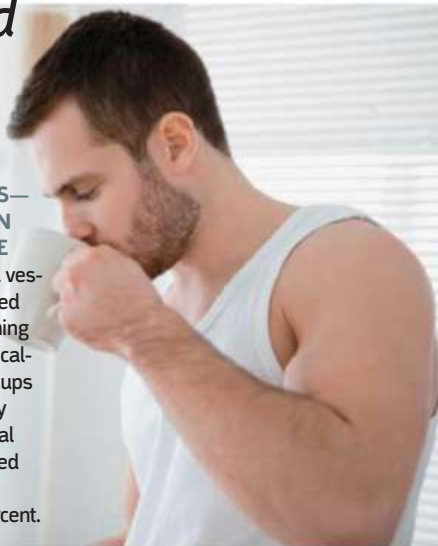
Massage Improves Performance After Exercise-Induced Muscle Damage

FIFTEEN MINUTES OF MASSAGE TO THE CALF MUSCLES FOLLOWING MUSCLE-DAMAGING EXERCISE RESULTED IN GREATER MUSCLE STRENGTH AND PROPRIOCEPTION, COMPARED TO A GROUP RECEIVING NO MASSAGE— ACCORDING TO RESEARCHERS FROM KOREA. Proprioception is the perception of movement and spatial orientation of various parts of the body. Muscle damage was induced using eccentric contractions, which injure important parts of the muscle cells (Z lines) and trigger secondary inflammation. Delayed onset muscle soreness (DOMS) has been a serious challenge to muscle physiologists for more than 100 years. Treatments such as stretching, ice, heat, active exercise, nonsteroidal anti-inflammatory drugs and muscle relaxers have been largely ineffective. Post-exercise massage might help prevent DOMS. (Journal Strength Conditioning Research, 29: 2255-2260, 2015)



Coffee Drinking Linked to Lower Coronary Artery Calcium

MODERATE COFFEE CONSUMPTION IS LINKED TO LOWER CALCIUM LEVELS IN CORONARY ARTERIES—ACCORDING TO A KOREAN STUDY OF MORE THAN 25,000 ADULT MEN AND WOMEN AS PART OF THE KANGBUK SAMSUNG HEALTH STUDY. Heart blood vessel calcium levels were determined by cardiac-computed tomography. Compared to non-coffee drinkers, consuming one to three cups per day reduced the risk of coronary calcium accumulation by 13 percent. Drinking four or five cups per day reduced the risk by 40 percent. Coronary artery disease involves deposits of calcium, fats and abnormal inflammatory cells in the arterial blood vessels. Elevated calcium scores increase the risk of heart attack by 25 percent and premature death from all causes by 12 percent. (Heart, 101: 686-691, 2015)



POOR DIET INCREASES THE RISK OF MELANOMA

POOR DIET, AS MEASURED BY THE HEALTHY EATING INDEX (HEI) AND THE DIETARY APPROACHES TO STOP HYPERTENSION INDEX (DASH), SHOWED THAT WOMEN WHO CONSUME POORER QUALITY DIETS HAVE AN INCREASED RISK OF MELANOMA—ACCORDING TO RESEARCHERS FROM ITALY. Dietary quality was not related to the incidence of melanoma in men. Melanoma accounts for about four percent of skin cancers but is responsible for 80 percent of skin cancer deaths. The disease is attributed to the widespread use of tanning beds, environmental factors such as sun exposure and genetic susceptibility. Dietary antioxidants may be an important way of helping the body prevent melanoma. (Journal of Nutrition, 145: 1800-1807, 2015)

Sugar or Artificial Sweeteners?

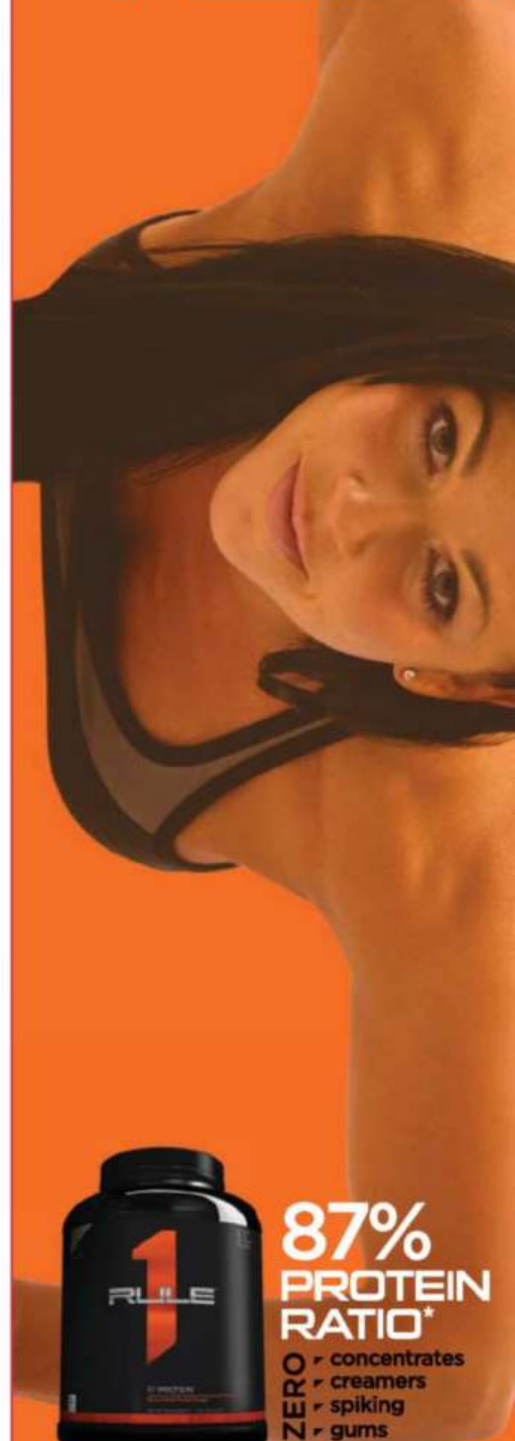
ARTIFICIAL SWEETENERS HAVE BEEN AROUND SINCE THE EARLY 1960s, AND HAVE BEEN CONTROVERSIAL EVER SINCE. Aaron Carroll, a professor of pediatrics at Indiana University School of Medicine, discussed the relative benefits of sugar versus artificial sweeteners. Artificial sweeteners have been linked to cancer in laboratory animals, but these results have not been replicated in humans. In fact, large population studies and literature reviews have shown that these substances are safe. Excess sugar is another matter. Fat and overall bodyweight increase with sugar intake, while increased use of artificial sweeteners results in lower bodyweight and less fat. Overconsuming sugar increases the risk of type 2 diabetes, and doubles the chances of dying from cardiovascular disease. Excess sugar intake is unhealthy, while artificial sweeteners appear harmless. (The New York Times, August 10, 2015)

SPICY FOODS PREVENT PREMATURE DEATH

EATING SPICY FOODS THREE TO SIX DAYS PER WEEK REDUCES DEATH FROM ALL CAUSES (DEATHS PER YEAR) AND THE RISK OF DEATH FROM CANCER, CORONARY ARTERY DISEASE AND RESPIRATORY DISEASE—ACCORDING TO RESEARCHERS FROM CHINA. They examined nearly 250,000 healthy men and women aged 30 to 79. Eating spicy foods decreased the risk of premature death by about 14 percent. The effects of spicy foods on death rates were greatest in people who did not drink alcohol. Spicy foods contain several chemicals such as capsaicin that have been linked to metabolic health and weight reduction. (British Medical Journal, 351: H 3942, 2015)



THIS IS PROTEIN



87% PROTEIN RATIO*

- ZERO concentrates
- cremers
- spiking
- gums

*Depending on Flavor

Get Your Sample Pack Today!
ruleoneproteins.com

LARGE, WEEKLY DOSES OF OMEGA-3 FATTY ACIDS *Best for Whole-Body Retention*

THE OMEGA-3 FATTY ACIDS EPA AND DHA FOUND IN FATTY FISH REDUCE THE RISK OF HEART ATTACK, MODESTLY LOWER BLOOD PRESSURE, REDUCE INFLAMMATION, DECREASE THE RISK OF DEMENTIA AND HELP TREAT DEPRESSION. Giovanni Turchini from Deakin University in Australia and colleagues, in a study on rats, found that administering large doses of omega-3s once a week resulted in greater omega-3 retention than daily supplementation. If these results apply to humans, taking high doses of omega supplements 3 once or twice a week is preferable to consuming them every day. (Nutrients, 7: 5628-5645, 2015)



BETA-ALANINE IS AN EFFECTIVE SPORTS SUPPLEMENT

ALANINE IS AN AMINO ACID THAT HELPS SUPPLY ENERGY DURING EXERCISE. It is converted to blood sugar in the liver by a process called the glucose-alanine cycle. While it is not used to synthesize muscle tissue or enzymes, it influences exercise capacity—particularly endurance performance. The International Society of Sports Nutrition, in a position statement, concluded that alanine increases muscle carnosine levels and acts as an intracellular buffer. Alanine is a safe supplement with few side effects. It improves exercise performance in exercise lasting one to four minutes. It reduces fatigue in older people, and may be particularly beneficial when consumed with other supplements such as creatine monohydrate. (Journal International Society Sports Nutrition, 12: 30, 2015)

Fenugreek Has Marginal Effects on Testosterone and Strength

TRIGONELLA FOENUM-GRÆCUM (TFG) IS AN HERB MORE COMMONLY KNOWN AS FENUGREEK. Many bodybuilders use it to increase testosterone. A study from the University of Mary Hardin-Baylor in Texas showed that 500 milligrams of TFG per day increased sex drive, sexual function and increased upper and lower body strength in weight-trained men. Researchers found no changes in free or total testosterone, and strength changes were marginal. TFG is reported to have both aromatase- and 5-alpha reductase-inhibiting properties, which increase testosterone availability in target tissues. A more recent Indian study showed that fenugreek increased testosterone, decreased fat and had a small effect on muscle strength. Its sexual effects might be more promising than its marginal effects on athletic performance. (Journal of Sport Health Science, published online March 7, 2015; Journal International Society Sports Nutrition, 7: 34, 2010)



Beetroot Juice Improves Performance and Cardiovascular Function

BEETROOT JUICE IMPROVES ENDURANCE CAPACITY, BOOSTS OXYGEN DELIVERY AND REDUCES THE WORK OF THE HEART DURING EXERCISE—ACCORDING TO RESEARCHERS FROM KOREA AND THE UNIVERSITY OF CALIFORNIA, DAVIS. College-aged males were fed beetroot juice or nitrate-depleted beetroot juice for 15 days. Beetroot juice doubled blood nitric oxide, a critical chemical for controlling blood flow. Beetroot juice reduced systolic blood pressure, diastolic blood pressure, mean arterial pressure and total peripheral resistance at rest and during exercise. It also lowered the load on the heart during exercise, as measured by rate-pressure product (heart rate times systolic blood pressure). Beetroot juice is an important supplement for improving cardiovascular health and enhancing endurance capacity. Other studies have found that a single glass of beetroot juice increased performance in kayaking and cycling. (American Journal of Physiology Regulatory, Integrative and Comparative Physiology, published online June 17, 2015)



FROM GNC'S #1 SELLING EXCLUSIVE BRAND¹ **NEW**

OUR STRONGEST PRE-WORKOUT EVER!

SUPERIOR PERFORMANCE WITH AN ALL-NEW PRE-WORKOUT BREAKTHROUGH

#Shatter™ SX-7® Black Onyx™ has changed pre-workouts forever. It delivers research-backed musclebuilding with scientifically advanced core ingredients in a never-before-seen combination.

- Powerful sensory with a new combination of premium ingredients like *Scutellaria*, satsuma orange, *Myristica* & more
- Featuring patented PEAK ATP® – study subjects built 8.8 lbs. of lean muscle in 12 weeks and increased muscle thickness by 96%
- Subjects increased max bench press strength and boosted their peak power output by 30% as measured by vertical jump tests
- Patented CarnoSyn® beta-alanine helps enhance the muscle- and strength-building process
- Formulated based on research at the University of Tampa
- Research on key ingredients published in *Nutrition & Metabolism* and the *International Journal of Sports Nutrition & Exercise Metabolism*
- Fully disclosed, fully dosed formula with no proprietary blends
- Tested for purity by a certified U.S., independent, third-party lab



STRENGTH INCREASE IN 12 WEEKS (TOTAL STRENGTH ON BENCH, SQUAT & DEADLIFT)



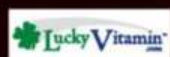
EXTREME MUSCLE GAIN



**BASED ON RESEARCH FROM
THE UNIVERSITY OF TAMPA**



PEAK ATP® is a registered trademark of TSI USA Inc. and is used under license. Uses of PEAK ATP® are licensed to Iovate by TSI USA Inc. under U.S. patent numbers 6,723,737, 7,671,038 and 7,629,329. CarnoSyn® is licensed under one or more of U.S. patent numbers 5,965,596, 6,426,361, 7,504,376 and 8,067,381, each of which is owned by Natural Alternatives International, Inc. (NAI). NAI is also the owner of the registered trademark CarnoSyn®.



¹Based on combined SX-7® brand sales at GNC.
Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

MUSCLETECH.COM



NEW!

**SUPERIOR
MUSCLE
BUILDING
FORMULA &
UNRIVALED
TASTE**



**INGREDIENTS BASED ON MULTIPLE
CLINICAL STUDIES ON
PERFORMANCE**

- Loaded with 4g BCAAs, 2.5g betaine, 1g taurine, plus hydration boosters[†]
- Full clinical doses of researched key ingredients
- Scientifically formulated to build lean muscle & boost strength
- Fully disclosed formula – no proprietary blends
- Available in 4 flavors: Fruit Punch Splash, Icy Rocket Freeze, White Raspberry, & Watermelon



SUPERIOR SCIENCE. SUPERIOR RESULTS.™

MUSCLETECH.COM

[†]Based on two scoops. Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

SUPPLEMENT CUTTING-EDGE RESEARCH



Alanine May Be an Effective Supplement for Soldiers in the Field

HIGH-INTENSITY MILITARY TRAINING IS PHYSICALLY AND MENTALLY EXHAUSTING. Beta-alanine supplements might benefit soldiers in the field by preventing fatigue, boosting power output and enhancing mental function—according to a literature review led by Jay Hoffman from the University of Central Florida in Orlando. Alanine is broken down to form carnosine, which is a powerful intercellular buffer that delays fatigue. Alanine also increases exercise capacity in activities lasting 60 to 360 seconds. It might prevent mental fatigue by enhancing cognitive function, and help soldiers withstand the effects of physical and emotional stress. (Amino Acids, published online July 24, 2015)

HMB Improves Aerobic Capacity and Body Composition in Athletes

BETA-HYDROXY-BETA-METHYLBUTYRATE (HMB) IS A METABOLITE OF THE AMINO ACID LEUCINE. Some studies found that HMB prevented muscle protein breakdown, stimulated muscle growth and promoted fat breakdown. Researchers from Poznan University of Technology in Poland found that rowers taking three grams of HMB daily for 12 weeks showed increases in maximal oxygen consumption, heart and breathing responses to exercise, and decreased fat mass compared to a placebo (fake HMB). HMB improves aerobic capacity, reduces body fat and increases peak power output, so it would be an effective supplement for endurance athletes. (Journal International Society Sports Nutrition, 12: 31, 2015)

Creatine Does Not Increase Levels of Cancer-Causing Chemicals

CREATINE MONOHYDRATE DOES NOT INCREASE BLOOD LEVELS OF CANCER-CAUSING CHEMICALS. CREATINE HAS BEEN THE MOST POPULAR SPORTS SUPPLEMENT ON THE PLANET SINCE THE 1990s. Creatine increases strength and power, promotes recovery during interval training and improves cellular metabolic efficiency by increasing creatine phosphate. Some researchers have warned that creatine could cause cancer, because it is broken down into toxic chemicals called heterocyclic amines (HCAs). Bruno Gualano from the School of Physical Education and Sport in São Paulo, Brazil and colleagues found that feeding either high or low doses of creatine did not increase HCAs in blood. They concluded that creatine monohydrate does not increase the risk of cancer by forming dangerous carcinogenic chemicals. (The Journal of Physiology, published online July 6, 2015)

SUPPLEMENTING CALCIUM

May Increase the Risk of Heart Attack and Stroke

CALCIUM AND VITAMIN D SUPPLEMENTS MAY PREVENT OSTEOPOROSIS AND FRACTURES, PARTICULARLY IN WOMEN. However, calcium may also increase the risk of heart attack and stroke. Inke Thiele from the Institute of Epidemiology in Neuherberg, Germany and co-workers, in a study of 1,601 people aged 60 to 80, found that calcium supplements increased the risk of atrial fibrillation (a heart arrhythmia) that could increase the risk of heart attack and stroke. Vitamin D was linked to a lower risk of peripheral arterial disease. We need more research to assess the relative risks and benefits of calcium. (Atherosclerosis, published online June 19, 2015)



CLINICALLY RESEARCHED PRE-WORKOUT BREAKTHROUGH

NEW

BUILD 90% MORE MUSCLE



THE ONLY PRE-WORKOUT WITH PEAK ATP® & MYRISTICA FOR AN UNPARALLELED SENSORY EXPERIENCE

Engineered with 7 cutting-edge, premium ingredients, #Shatter™ SX-7® is a breakthrough pre-workout formula that's designed to perform. It delivers patented Peak ATP® (adenosine 5'-triphosphate disodium), which was shown in a 12-week clinical study from The University of Tampa to help hard-training athletes amp up strength by 147% more than subjects using a placebo. They even put on 8.8 lbs. of lean muscle, while the placebo group only gained 4.6 lbs. – that's 90% more lean muscle! This fully disclosed formula also packs:

- A powerful, premium combination of the sensory ingredients *Myristica fragrans*, *Ecklonia cava*, holy basil and grains of paradise
- Better focus, energy, pumps & performance
- Fully disclosed formula
- Research published in the journal *Nutrition & Metabolism*
- Purity and quality tested by a certified U.S., independent, third-party lab



Based on research conducted at The University of Tampa and published in *Nutrition & Metabolism*.



Peak ATP® is a registered trademark of TSI USA Inc. and is used under license. Uses of ATP are licensed to Iovate by TSI USA Inc. under U.S. patent numbers 6,723,737; 7,671,038; and 7,629,329.



Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

MUSCLETECH.COM/#SHATTERSX7





IGF-1 SUPPRESSES MYOSTATIN DURING MUSCLE CELL DEVELOPMENT

THE MUSCLE GROWTH FACTOR IGF-1 WORKS, IN PART, BY SUPPRESSING MYOSTATIN— A CHEMICAL THAT LIMITS MUSCLE PROTEIN SYNTHESIS. The body has a carefully regulated system for ensuring that muscles can grow in response to exercise and diet, but not so much that they trigger excessive growth. There is an upper limit to muscle hypertrophy because of this balance between IGF-1 and myostatin. Otherwise, bodybuilders would have 50-inch arms. Promoting muscle growth requires stimulation of metabolic pathways that activate protein synthesis (e.g., mTOR) through exercise and diet and inhibiting myostatin, which limits growth. Muscle hypertrophy is biologically expensive for the body. When you stop training or eating optimally, muscles atrophy rapidly. The upper limits of muscle growth are determined by factors such as genetics, the availability of anabolic hormones, sources of protein building blocks and the suppression of myostatin. (Biochemical and Biophysical Research Communications, published online July 4, 2015)

Testosterone Supplements Do Not Accelerate Cardiovascular Disease

ATHEROSCLEROSIS (HARDENING OF THE ARTERIES) DID NOT PROGRESS IN MEN WITH LOW OR SUBNORMAL TESTOSTERONE LEVELS TREATED WITH SUPPLEMENTAL TESTOSTERONE FOR THREE YEARS— ACCORDING TO A STUDY LED BY SHALENDER BHASIN FROM HARVARD MEDICAL SCHOOL, AND COLLEAGUES. Aging men (average age 67.6) received testosterone gel or placebo (fake testosterone) daily for three years. The dose was adjusted so that blood levels of testosterone were between 500 and 900 nanograms per 100 milliliters of blood (normal levels for young men). The testosterone supplements did not cause changes in the thickness of the coronary or carotid arteries or in blood vessel calcium deposition. Hormone replacement therapy does not accelerate coronary artery disease in aging men. (Journal American Medical Association, 314:570-581, 2015)



ATHLETES USING EXPERIMENTAL DRUGS BEFORE THEY HIT THE MARKET

ATHLETES AND THE DRUG POLICE PLAY A CAT-AND-MOUSE GAME. Athletes try to beat drug tests, while drug testers try to keep up with them. Cyclists have taken this to a new level by using experimental drugs. Two cyclists recently tested positive for an experimental drug called FG-4592 that boosts red blood cell production. They obtained it from a company that only sells products to universities and research institutions. The drug has not been approved for human use. Unlike the injected red cell boosting drug EPO, FG-4592 is taken as a pill. (The New York Times, July 29, 2015)



Long-Term Testosterone Treatments Safe and Effective

BASED ON 25 YEARS OF ADMINISTERING TESTOSTERONE THERAPY AT THE CENTER FOR MEN'S HEALTH IN LONDON, U.K., MALCOLM CARRUTHERS AND COLLEAGUES CONCLUDED THAT LONG-TERM TREATMENT WAS SAFE AND EFFECTIVE FOR REDUCING SYMPTOMS AND IMPROVING THE QUALITY OF LIFE. The results were consistent using a variety of testosterone preparations including injections, pills, gels and implants. Testosterone therapy had no effect on prostate-specific antigen (PSA), the incidence of prostate cancer or coronary artery disease risk factors. Physicians are denying men treatment for testosterone deficiency because of unwarranted safety concerns. (The Aging Male, published online July 28, 2015)

Anabolic Drugs Are the Most Commonly Detected Banned Substances

THE WORLD ANTI-DOPING AGENCY (WADA) SETS THE STANDARDS FOR DRUG TESTING IN OLYMPIC SPORTS. They test for drugs that affect skill, strength, endurance and recovery. Anabolic steroids and growth hormone are the drugs of choice for high-power sports athletes. Endurance athletes are more likely to be involved in blood doping, either through transfusions or erythropoietin, which stimulates red blood cell production. Athletes in contact sports often use growth hormone to speed recovery. Hormones account for two-thirds of doping violations in sports. The agency is interested in substances that enhance performance, are harmful to health and violate the spirit of sport. (Performance-Enhancing Hormone Doping in Sport, published online May 19, 2015)



Ibuprofen Does Not Promote Recovery



MANY ATHLETES TAKE NONSTEROIDAL ANTI-INFLAMMATORY DRUGS SUCH AS IBUPROFEN TO REDUCE PAIN AND PROMOTE RECOVERY AFTER INTENSE WORKOUTS. Ibuprofen did not affect distance-running performance after an intense leg workout designed to cause muscle soreness— according to a study from Brazil. Distance runners participated in a time trial followed by an intense leg workout. They were given either ibuprofen or a placebo (fake ibuprofen). Forty-eight hours later, they completed a second time trial. Ibuprofen had no effect on reducing muscle damage, pain or performance on the second time trial. Ibuprofen does not promote recovery from intense endurance running or weight training. (Journal of Athletic Training, 50: 295-302, 2015)

Low Testosterone Is a Risk Factor for Metabolic Syndrome

THE METABOLIC SYNDROME IS A GROUP OF SYMPTOMS LINKED TO POOR METABOLIC HEALTH THAT INCLUDE HIGH BLOOD PRESSURE, INSULIN RESISTANCE, ABNORMAL BLOOD FATS, ABDOMINAL FAT DEPOSITION AND TYPE 2 DIABETES. The metabolic syndrome is linked to an increased risk of heart attack, stroke and poor blood sugar regulation. French researchers found that low testosterone was an independent predictor of metabolic syndrome and whole-body inflammation. Many recent studies have found a link between low testosterone levels and coronary artery disease. This study found that low testosterone was a sign of poor metabolic health and inflammation, which are also risk factors for heart disease. (Annales d'Endocrinologie, 73: 260-263, 2015)



High-Intensity Exercise Moderates Effects of Steroids on the Brain

ANABOLIC STEROIDS TRIGGER INCREASES IN OXIDATIVE STRESS IN THE BRAIN. Free radicals produced naturally during metabolism are highly reactive chemicals that can damage cell membranes and DNA, and suppress the immune system. Oxidative damage in the brain has been linked to Parkinson's disease, Alzheimer's disease, multiple sclerosis and Lou Gehrig's disease. Intense exercise plays an important role in reducing the effects of free radicals on the brain. A Spanish study using rats found that intense exercise reduced the negative effects of anabolic steroids on brain free radicals. (International Journal Sports Medicine, published online August 7, 2015)

SUBSCRIBE NOW!



SAVE 25%

ON A 2-YEAR SUBSCRIPTION!

12 ISSUES for \$29.00

(THAT'S JUST \$14.95 A YEAR!)

Use Coupon Code "FRXM1015"

HURRY! Offer expires Oct. 31st, 2015

CALL 1-800-653-1151

or ORDER ONLINE

WWW.FITNESSRX FORMEN.COM

OFFER VALID ON A TWO YEAR SUBSCRIPTION ONLY
OFFER EXCLUDES FOREIGN SUBSCRIPTION RATES
FOREIGN SUBSCRIPTION RATES (INCLUDING CANADA)
ARE \$28.00 FOR ONE YEAR

Is Your Penis Pleasing to Women?

MEN LOVE THEIR PENISES, AND SPEND A LOT OF TIME PLAYING WITH THEM AND LOOKING AT THEM.

Equally important is the perception of others toward your penis. Swiss researchers from University Children's Hospital Zürich polled 105 women aged 16 to 45 about the importance of eight different penile characteristics. Women rated cosmetic appearance as most important, followed by girth and length. Other important factors included the appearance of pubic hair and the texture of the skin. None of the characteristics dominated the others, which shows that women appreciate a wide diversity of penises. (Journal Sexual Medicine, published online July 20, 2015)



SEXUAL PROBLEMS Decrease Relationship Happiness

MEN HAVE MORE SEXUAL PROBLEMS AS THEY AGE, WHICH INCLUDE LOSS OF SEXUAL DESIRE, ERECTION PROBLEMS, PREMATURE EJACULATION AND DELAYED OR ABSENT ORGASM. Raymond Rosen and colleagues from the New England Research Institutes found that men with sexual problems showed reduced relationship happiness. Women were also less happy and sexually satisfied, but sexual problems affected men more than women. Aging couples were generally able to cope with sexual decline because they tended to have higher levels of physical affection and relationship happiness. (Archives of Sexual Behavior, published online July 31, 2015)



LEVITRA HELPS MEN Keep It Up Longer

MEN TREATED WITH LEVITRA (VARDENAFIL) FOR EIGHT WEEKS WERE ABLE TO MAINTAIN ERECTIONS FOR AN AVERAGE OF 9.39 MINUTES— ACCORDING TO KOREAN RESEARCHERS. Patients took between 10 milligrams and 20 milligrams of the drug. Erection duration was measured four different times during heterosexual intercourse. The drug therapy improved the success rate of penetration, maintaining erections, ejaculation and sexual satisfaction. Levitra is an effective drug for improving sexual performance and enjoyment. (International Journal Impotence Research, 27: 95-102, 2015)



MEDICARE WON'T SUPPORT SEXUALITY IN OLDER ADULTS

SEXUAL ACTIVITY IS CENTRAL TO HAPPINESS AND QUALITY OF LIFE— ACCORDING TO A STUDY BY DAVID BLANCHFLOWER FROM DARTMOUTH COLLEGE IN NEW HAMPSHIRE AND ANDREW OSWALD FROM THE UNIVERSITY OF WARWICK IN BRITAIN. Regular sexual activity helps maintain testosterone levels and prevents prostate cancer in aging men. Yet, Medicare won't fund treatment for their sexual problems. Congressman Steve King from Iowa called medications like Viagra "lifestyle drugs" and said, "Taxpayers wouldn't foot the tab for 'grandpa's Viagra.'" Erection problems are common in men over 60, with 70 percent of men over 70 unable to get or maintain erections. Erectile dysfunction goes hand-in-hand with diseases such as coronary artery disease and diabetes. Many middle- and lower-income retired people cannot afford Viagra at \$38 per pill. Congressman King's ageist attitude will no doubt change if the day comes when he can no longer get it up. (The New York Times, August 4, 2015)



MUSCLESSPORT®

ALL-IN-ONE ADVANCED PREWORKOUT

NO PROPRIETARY BLENDS | CLINICALLY DOSED INGREDIENTS



complete
nutrition

HYPERHYDRATION

TRIGGERS
PERFORMANCE

PERFORMANCE
BY DESIGN

JUZZED

BODY DYNAMICS
PURE KINETICS

PRIMAL
NUTRITION



BECOME A RETAILER
RETAIL@MUSCLESPO.RT.COM

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

PAIN RELIEVER TRAMADOL Effectively Treats Premature Ejaculation

PREMATURE EJACULATION (PE) IS THE MOST SIGNIFICANT SEXUAL PROBLEM IN MEN. THE ANTI-PAIN MEDICATION RYBIX (TRAMADOL) IS EFFECTIVE FOR TREATING IT—ACCORDING TO A REVIEW OF LITERATURE LED BY WILL KIRBY FROM THE DEPARTMENT OF UROLOGY AT THE UNIVERSITY OF NORTH CAROLINA. Tramadol, taken when needed, increased time to ejaculation and improved sexual satisfaction. However, some studies have found that the drug only works for about eight weeks of treatment and is ineffective after that. Premature ejaculation is most prevalent in men aged 18 to 40. Factors increasing the risk of premature ejaculation include past history of sexually transmitted diseases or urinary tract infections, poor health, emotional stress, loss of income, past history of same-sex activity, history of sexual harassment and childhood abuse. Factors decreasing the risk of PE include daily alcohol consumption, circumcision and greater sexual experience. Tramadol might provide relief for this significant sexual problem. (International Journal Impotence Research, 27: 121-127, 2015)



Erectile Dysfunction Linked to Diabetes

MANY RECENT STUDIES FOUND THAT ERECTILE DYSFUNCTION IS AN EARLY WARNING SIGN OF CARDIOVASCULAR DISEASE AND HEART ATTACK. A study led by Sean Skeldon from the Center for Health Services and Policy in Vancouver, Canada found that erectile dysfunction (ED) increased the risk of diabetes by 220 percent. The researchers found no link between ED and high blood pressure or high blood cholesterol. Men with erectile dysfunction, particularly those in middle age, should be thoroughly screened for diabetes. (Annals of Family Medicine, 13: 331-335, 2015)



Shockwave Treatment Improves Erections

LOW-INTENSITY SHOCKWAVE TREATMENT IMPROVED ERECTION QUALITY IN 81 PERCENT OF MEN TREATED FOR SIX MONTHS. The treatment works by improving the quality and quantity of blood flow in the penis. Erectile dysfunction (ED) is mainly caused by blood vessel problems related to physical inactivity, poor diet, genetics and aging. Erectile dysfunction is usually treated by drugs such as Viagra and Cialis, which work by promoting nitric oxide release from the inner lining of the arteries in the penis. These drugs, however, will not compensate for diseased blood vessels. Shockwave treatment improved blood vessel function rather than compensating for diseased tissue the way drugs do. Regular exercise is one of the best ways to improve circulation in the penis. Men who practiced aerobics for 12 months experienced the same improvement in erection quality as those taking ED drugs. Shockwave treatment may be a viable alternative to drugs for treating erectile dysfunction. (International Journal Impotence Research, 27: 108-112, 2014)

Venom From Brazilian Wandering Spiders Promotes Erections

THE BRAZILIAN WANDERING SPIDER IS EXTREMELY AGGRESSIVE, AND WAS RATED BY THE BOOK GUINNESS WORLD RECORDS AS THE WORLD'S MOST POISONOUS SPIDER. Its venom works by poisoning the nervous system and causing intense inflammation. Humans bitten by the spider sometimes experience priapism, which are erections lasting many hours. The poison promotes erections by stimulating the release of nitric oxide from the inner lining of the blood vessels. Chemicals in the venom might be useful for developing drugs to treat erectile dysfunction. (Nature Review Urology, 12: 419, 2015)

BETTER THAN WHEY

A New Groundbreaking Clinical Study* On Protein Reveals That MHP's Probolic-SR Is Superior To Whey For Building Lean Muscle Mass!

MHP's Probolic-SR, the world's first combination protein supplement of its kind, is formulated to provide fast, medium and slow releasing proteins in one advanced formula. The combination of these precise muscle building proteins provide far greater anabolic and anti-catabolic benefits than any other single protein supplement.

7X Greater Anabolic Activity*

This recent landmark study confirms that consuming a blend of proteins as found in Probolic-SR provides a fast releasing whey, medium releasing soy isolate and slow releasing casein, thereby supplying a prolonged delivery of amino acids to the muscles for 7x greater anabolic activity.* This combination increases the "anabolic window," making Probolic-SR superior for consumption following resistance exercise versus whey protein alone.

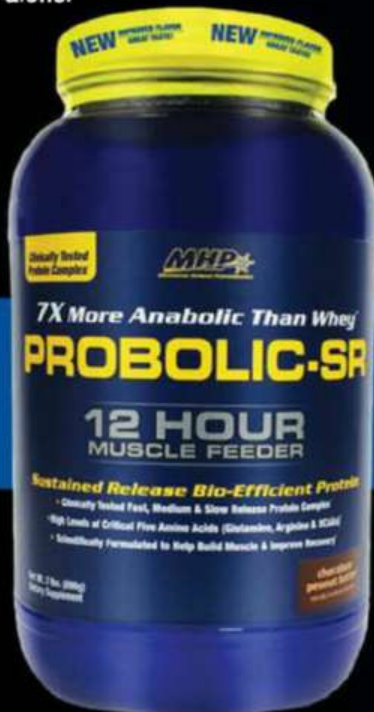
Marco Rivera
IFBB Pro • Team MHP

PATENTED MICRO-FEED TECHNOLOGY

To enhance its already powerful anabolic/anti-catabolic properties, Probolic-SR contains a patented Sustained Release Micro-Feed Technology that extends the release of amino acids even further for longer anabolic action. This breakthrough delivery technology is so advanced, it's patented.

If you're looking for explosive muscular growth and maximum anabolic effects, you can count on Probolic-SR.

Gym tested and research proven... Test it for yourself.



Join Team MHP!



1.888.783.8844

MHPSTRONG.com



*Soy-dairy protein blend and whey protein ingestion after resistance exercise increases amino acid transport and transporter expression in human skeletal muscle. Reidy, P.T., et al., Journal of Applied Physiology, April 3, 2014.

© 2015 Maximum Human Performance, LLC. All rights reserved. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, cure, treat or prevent any disease. Your results may vary. Not intended for use by those with a medical condition. Use only as directed. Do not exceed recommended daily intake. Not intended for use by persons under age 18.

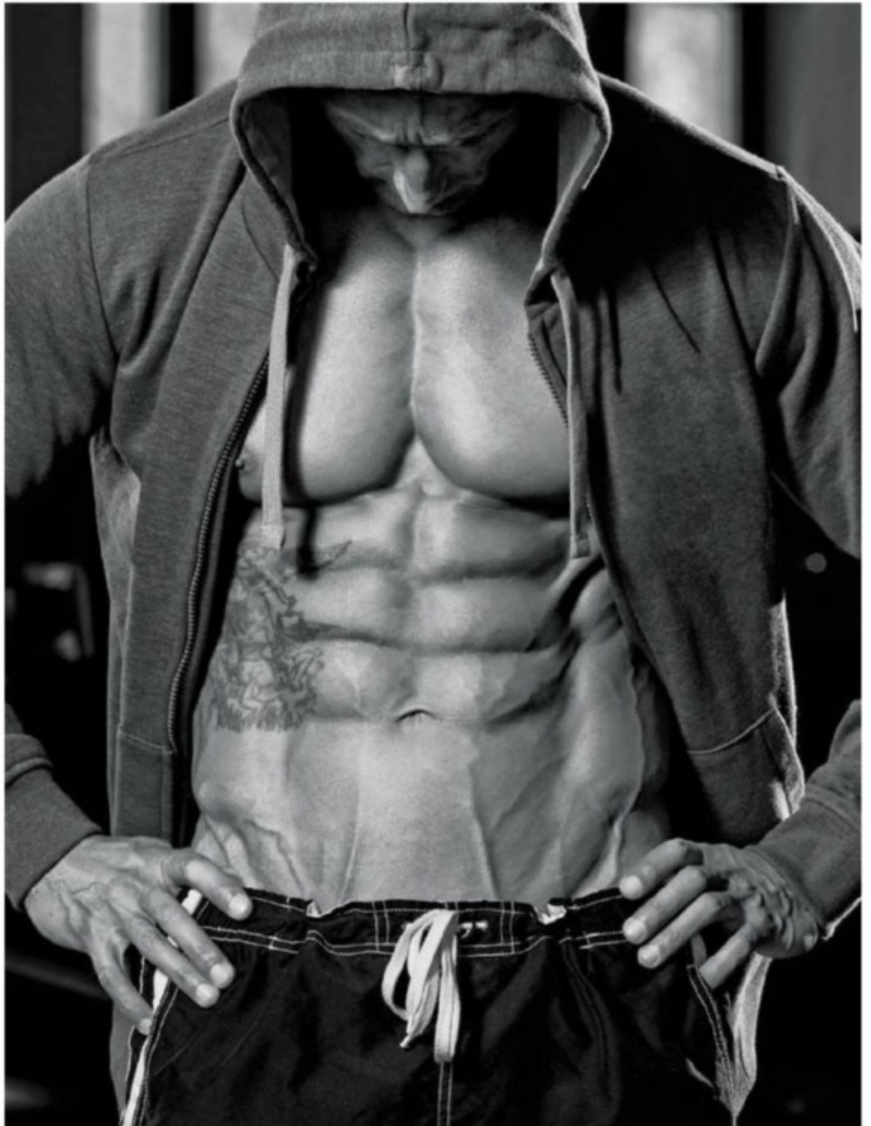
MELATONIN AND SEROTONIN (5-HT) ENHANCE WEIGHT LOSS AND BROWN FAT

Mention melatonin or serotonin, and most people think of sleep aids or depressed people. Wow, what a buzzkill. However, these two metabolites of the amino acid tryptophan are involved with a host of neuroregulatory pathways that maintain normal, and likely optimal, function. Most people have heard of the association between missing sleep or not sleeping enough (or too much), and obesity. Certain antidepressants are associated with weight loss, and selective serotonin reuptake inhibitor (SSRI) drugs have or are currently being used with some success as weight-loss drugs.¹ It is time these two received recognition for their role in weight management and fat loss.

Serotonin is a neurotransmitter, sometimes called 5-HT (5-hydroxytryptamine), that supports a positive mood. There are at least seven different receptor classes (with subclasses of each), so when receptor subclass-specific effects are impacted by drugs, unintended consequences may arise. Serotonin also acts on several pathways related to energy balance, located in the hypothalamus.² These pathways affect appetite, metabolic rate, activity and connect to brown fat. Brown fat is not the more familiar "white fat" that stores fat for later use as energy; rather, it is a thermogenic tissue that burns calories (sugars and fatty acids), wasting much of the energy as heat. A considerable amount of effort is being put forth by the pharmaceutical industry to create drugs that can increase brown fat mass, and/or activity. Recently, it has been discovered that "white fat" precursor cells can develop brown fat traits in the right conditions, creating "beige fat." Serotonin-related drugs may be one class of drugs that fill the bill.

SSRIs AND WEIGHT LOSS

Selective serotonin reuptake inhibitor antidepressants have been used for some time. Contrary to other antidepressants, which have been associated with weight gain, SSRIs have been reported to be associated with weight



loss— though individual experiences vary widely. This effect is most consistent with the drug fluoxetine (Prozac), though people should be aware that significant side effects are common in this class of drug.¹ This observation of weight loss led to the development of weight-loss drugs that target specific 5-HT receptors, or stimulate the release of serotonin— specifically fenfluramine, dexfenfluramine and sibutramine.

Melatonin has long been used to adjust to jet lag, and combat insomnia. However, there are numerous other functions to this hormone produced in the pineal gland, a tiny gland in the “ancient” part of the brain.³ Among these other functions, based on animal study data, melatonin plays a role in the development of brown fat, even beige fat. The effect is most apparent in animals that hibernate, as they develop less brown fat if the pineal gland is removed shortly after birth. Even in larger animals that are not hibernators, melatonin production by the mother ewe (a female sheep) regulates the brown fat of its lambs during pregnancy and the effect persists past the birth.⁴ Those planning a pregnancy, or currently pregnant, need to consider the importance of sleep and a relaxing environment for the health of the unborn child.

MANIPULATING BROWN FAT

In a review on brown fat and ways to manipulate it to treat obesity, melatonin figured prominently.³ It is reported that cold and longer nights increase melatonin— signs of the oncoming change of seasons to colder weather, and the need to protect the body against falling temperatures. Injecting melatonin into the hypothalamus increased brown fat by 59 percent in one animal study, with the effect causing an increase in norepinephrine release in the nerves communicating with brown fat. When injected under the skin, which would be similar to taking melatonin in a tablet, this increase in brown fat mass was not present. However, brown fat also has receptors for melatonin, suggesting that taking a tablet might affect brown fat activity. The changes are varied in the tissue studies reported, but support a net increase in brown fat activity. Increased activity of the brown fat cells can result in oxidative damage, and melatonin has been shown to have direct protective effects in the mitochondria, supporting fat burning by protecting against the damage that results from an accelerated metabolism.^{3,5} The authors conclude that section of the review noting that melatonin (based on animal studies) could combat obesity, and potentially help against type 2 diabetes, by reducing chronic inflammation, bodyweight and increasing “non-shivering thermogenesis.”³

WAKAME SEAWEED (FUcoxANTHIN) BURNS FAT!

By Daniel Gwartney, M.D.

There are foods that most of us are never exposed to due to cultural or geographic limitations. When a food is consumed only by people in a certain region or culture, it allows researchers to see if different health aspects are present. It does not mean that the food, or cultural practice, causes the difference; just that there might be something present to look at more closely.

Wakame is called “brown seaweed” in the United States, and is a staple food ingredient in many Southeastern Asian regions. Though no single factor accounts for the difference, it is clear that the Western diet— you know the one ... cheeseburger, fries and a large diet soda— has played a role in the prevalence of obesity in the United States. Asian cultures avoided the obesity “contagion” until the United States was kind enough to export fast food.

Analysis of wakame revealed a carotenoid (the same class of chemical as vitamin A, astaxanthin, beta-carotene, etc.) called fucoxanthin that has been shown to affect a number of responses in animal studies, that suggest it may be an effective fat-loss agent for humans. Two recent reviews on fucoxanthin describe many of these effects.^{1,2} Again, much of this relies on animal or “test tube” studies.

Fucoxanthin has repeatedly been shown to prevent or reduce the fat gain of rodents placed on high-fat diets; reduce “fatty liver,” which is associated with insulin resistance and metabolic syndrome; improve insulin sensitivity; reduce inflammation in fat tissue; lower inflammatory cytokine (messenger signals) release from fat; increase enzymes associated with fat burning; and increase UCP-1 in white fat, which causes the fat cell to “waste” fat calories as heat. This is sometimes referred to as “beige fat,” as white fat (which normally stores fat) acts like brown fat, which burns fatty acids and glucose to generate heat.

All of these mechanisms are separate avenues of research for fat-loss drugs.

A pharmacokinetic study reported fucoxanthin is converted into the presumably active metabolite fucoxanthinol by intestinal and liver cells, reaching a maximal concentration in blood at four hours post-ingestion, with a seven-hour half-life.³ This is different from the rodent results, so it does emphasize the need for further human trials before any safety, efficacy and dosing recommendations can be given. Only a single human trial published in 2010 has been reported, though the findings were very promising.⁵ Among obese non-diabetic women, some with fatty liver disease (NASH), supplementation with a pomegranate oil and brown seaweed extract containing 2.4 milligrams of fucoxanthin was

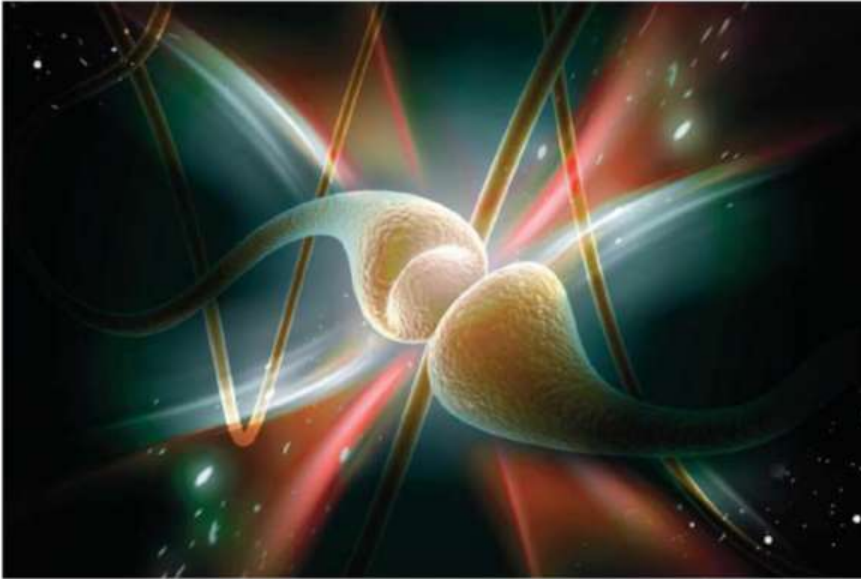
associated with an average loss of 11 pounds in 16 weeks, with significant losses in body and liver fat; liver enzymes and inflammatory markers were also lower. Further, resting energy expenditure was higher in those receiving the fucoxanthin supplement.

Given its role as a traditional food ingredient, fucoxanthin appears to be a product that can be reasonably included in a healthy person's diet if they wish to try to receive the benefits suggested by the existing literature. Based upon the rodent pharmacokinetic data, it appears that fucoxanthin's metabolites may accumulate with regular use, so it may not be necessary to use high doses, though the results may take weeks to months to be realized.⁴



REFERENCES:

1. Muradian K, Vaiserman A, et al. Fucoxanthin and lipid metabolism: A mini-review. *Nutr Metab Cardiovasc Dis* 2015;Jun 3. Epub, ahead of print.
2. Gammone MA, D'Orazio N. Anti-obesity activity of the marine carotenoid fucoxanthin. *Mar Drugs* 2015;13:2196-214.
3. Hashimoto T, Ozaki Y, et al. Pharmacokinetics of fucoxanthinol in human plasma after the oral administration of kombu extract. *Br J Nutr* 2012;107:1566-9.
4. Hashimoto T, Ozaki Y, et al. The distribution and accumulation of fucoxanthin and its metabolites after oral administration in mice. *Br J Nutr* 2009 Jul;102:242-8.
5. Abidov M, Ramazanov Z, et al. The effects of Xanthigen in the weight management of obese premenopausal women with non-alcoholic fatty liver disease and normal liver fat. *Diabetes Obes Metab* 2010;12:72-81.



Even more, melatonin has been shown to reduce the differentiation of “white fat,” which means that fewer white fat cells are created over time. Remember, white fat is the storage form of fat. Melatonin also may promote “browning” of white fat, where the storage function is switched to a thermogenic function— one of the more promising directions in weight management.³ It is important to note that though many of the benefits of melatonin occur in the body, not the brain, it is the role of melatonin in the hypothalamus that activates the brown fat activity. Taking a tablet or two of melatonin may aid in the peripheral effects, but the complete benefit profile of melatonin requires pineal secretion. This means that a calm, dark, preferably cool environment should be present as you relax into and maintain sleep.

TRYPTOPHAN AND 5-HTP

The serotonergic pathways can be supported by the consumption of tryptophan, or its immediate metabolite, 5-HTP (5-hydroxytryptophan).⁶ Both serve as precursors to serotonin and melatonin. In fact, tryptophan was used successfully as a sleep aid for years until a rare inflammatory disorder was associated with products produced using a technique that contained an adulterant. As tryptophan is an amino acid, most bodybuilders and athletes assume they do not need to worry about tryptophan. However, it competes with the branched-chain amino acids (BCAAs)— for example, leucine, isoleucine and valine— as well as tyrosine and phenylalanine.⁷ It is possible that those who consume high BCAA content diets may have a relative deficiency of tryptophan in the diet.

Both tryptophan and 5-HTP have been reported to improve sleep onset. However,

One case was described where a patient lost 24 percent of initial bodyweight in six months using the 5-HTP/carbidopa combination without phentermine.

have they been shown to have weight-loss effects acting as serotonin precursors? Well, enough so that many “obesity specialists” recommend a 5-HTP/carbidopa combination to complement phentermine (a stimulant drug) for their patients.⁸ Carbidopa prevents the conversion of 5-HTP to 5-HT before it gets to the brain.⁹ In the report, one case was described where a patient lost 24 percent of initial bodyweight in six months using the 5-HTP/carbidopa combination without phentermine.

Of course, tryptophan and 5-HTP are typically taken as dietary supplements. So, it is gratifying to see published trials using randomized subjects. 5-HTP, taken at a modest dose of 900 milligrams per day, resulted in significant weight loss compared to the placebo group in a setting of a recommended caloric guideline, or eating ad lib (without restrictions).¹⁰ Further, there was a reduction in carbohydrate intake and reported earlier satiety (feeling full when eating). In type 2 diabetics, who are reported to have decreased brain serotonin activity, 5-HTP supplementation (750 mg/day) with no caloric

restrictions resulted in weight loss, and reduced carbohydrate and fat intake.¹¹ Clearly, there is value to supplementing the diet to support serotonin and melatonin production, and availability for people seeking to lose weight.

HEALTHY BODY AND A GOOD NIGHT'S SLEEP

The body is designed to function autonomously (without direction) when it is healthy. Part of good health is supporting the mass and function of healthy tissue (e.g., skeletal muscle, brown fat). When the serotonin pathways are active, they can aid not only in reducing excess calorie intake, but also stimulate brown fat activity. Melatonin is involved in a myriad of functions, but even before birth, it plays a role in the creation of brown and beige fat. These thermogenic fats, through the actions of uncoupling protein that separate energy production from calorie burning, can aid greatly in fat loss and maintaining a lean physique. Brown fat is designed to do what people try to accomplish with ephedrine/caffeine or DNP. Though both serotonin and melatonin can be supplemented through increasing tryptophan or 5-HTP, as well as taking melatonin orally, the actions at specific sites in the brain are key to gaining the complete benefits. Part of accomplishing this involves developing good sleep hygiene— regular and sufficient sleep times, avoiding bright lights prior to sleep and maintaining a quiet and cool room. ■

REFERENCES:

1. Ferguson JM. SSRI antidepressant medications: adverse effects and tolerability. *Prim Care Companion J Clin Psychiatry* 2001;3:22-27.
2. Donovan MH, Tecott LH. Serotonin and the regulation of mammalian energy balance. *Front Neurosci* 2013 Mar 27;7:36(15 pp).
3. Roman S, Agil A, et al. Brown adipose tissue and novel therapeutic approaches to treat metabolic disorders. *Transl Res* 2015;165:464-79.
4. Seron-Ferre M, Reynolds H, et al. Impact of Maternal Melatonin Suppression on Amount and Functionality of Brown Adipose Tissue (BAT) in the Newborn Sheep. *Front Endocrinol* 2015 Jan 6;5:232(11 pp).
5. Pandi-Perumal SR, BaHammam AS, et al. Melatonin antioxidative defense: therapeutic implications for aging and neurodegenerative processes. *Neurotox Res* 2013;23:267-300.
6. Hildebrand P, Königschulte W, et al. Effects of dietary tryptophan and phenylalanine-tyrosine depletion on phasic alertness in healthy adults – a pilot study. *Food Nutr Res* 2015 Apr 29;59:26407(11 pp).
7. Fernstrom JD. Large neutral amino acids: dietary effects on brain neurochemistry and function. *Amino Acids* 2013;45:419-30.
8. Hendricks EJ, Rothman RB, et al. How physician obesity specialists use drugs to treat obesity. *Obesity* 2009;17:1730-5.
9. Itskovitz HD, Werber JL, et al. 5-Hydroxytryptophan and carbidopa in spontaneously hypertensive rats. *J Hypertens* 1989;7:311-5.
10. Cangiano C, Ceci F, et al. Eating behavior and adherence to dietary prescriptions in obese adult subjects treated with 5-hydroxytryptophan. *Am J Clin Nutr* 1992;56:863-7.
11. Cangiano C, Laviano A, et al. Effects of oral 5-hydroxy-tryptophan on energy intake and macronutrient selection in non-insulin dependent diabetic patients. *Int J Obes Relat Metab Disord* 1998;22:648-54.



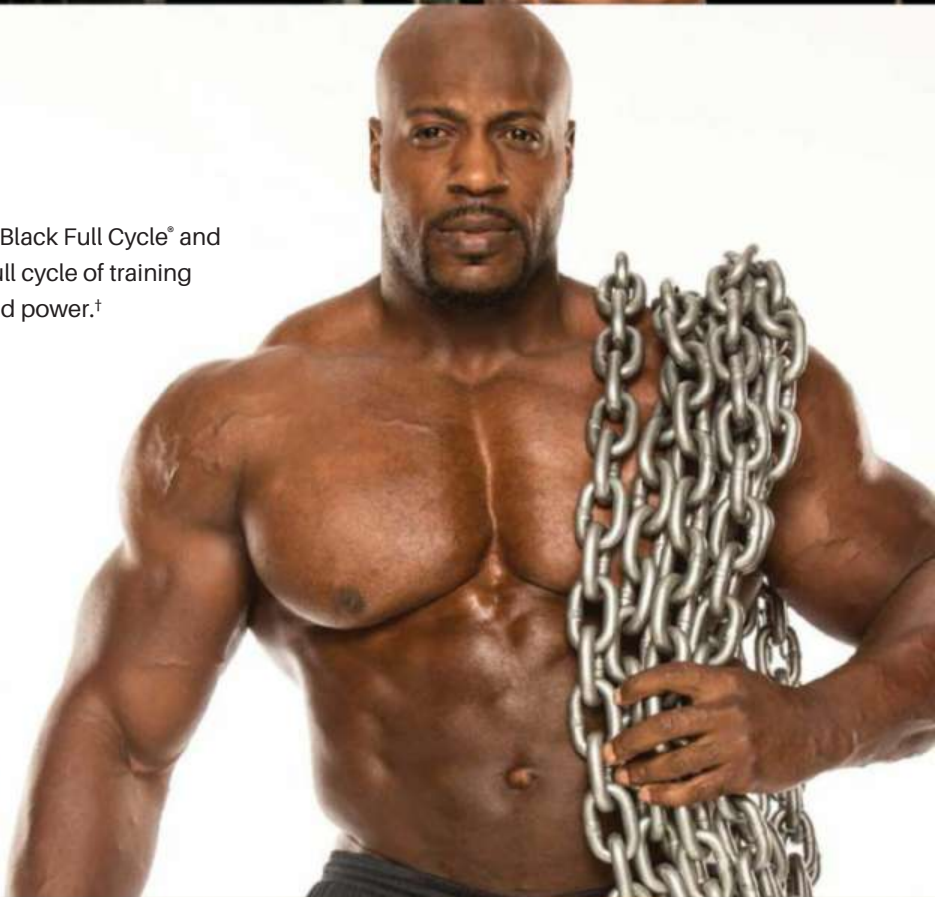
LIVE.

This is training for life. It's what we do. So live right, strive and truly succeed. Want to achieve your fitness goals? Balance is key.†



PLAY.

It's what we love to do. So play harder with NO2 Black Full Cycle® and Black Powder Ultra®. They help you impact the full cycle of training performance by boosting energy, endurance and power.†



REPEAT >

It's what we thrive on. Figuring out what works, hitting our goals and then repeating everything as we strive for the next level. Over and over again.†



> Learn more at mri-performance.com/play

† These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease. © 2015 MRI (Medical Research Institute)





MIRACLE POWERS OF CAPSAICIN

The phytochemical capsaicin is the substance found in chili peppers that contributes to the hot and spicy flavor of the chili pepper.

This miraculous compound has the unique capacity to promote a wide range of positive effects on human health, including reduced body fat, powerful antioxidant and anti-inflammatory effects and improved cardiovascular health, just to name a few. In fact, a recent epidemiological study investigating almost half a million people showed that the habitual consumption of chili-rich foods, loaded with capsaicin, reduced the likelihood of death from certain chronic diseases such as cancer and heart disease, relative to those who did not consume chili-rich, spicy foods.¹

In addition to capsaicin activating the TRPV1 receptor in certain neurons found within the gastrointestinal tract, triggering a process known as thermogenesis that burns body fat, capsaicin also produces many additional health benefits by activating the same TRPV1 receptor, yet in other tissues throughout the body. Activation of TRPV1 within these tissues triggers the function of different protein molecules, resulting in unique effects that are tissue-specific.

INCINERATE BODY FAT

One of the more influential TRPV1-dependent effects from capsaicin intake is the activation of TRPV1-expressing neurons within the oral cavity and gastrointestinal tract, which ultimately increases the amount of energy expenditure in brown adipose tissue (BAT) by a process known as thermogenesis.² Although the mechanism of action is not completely understood, some of the details include capsaicin activation of the TRPV1 receptor within the oral cavity and gastrointestinal tract, which triggers the release of noradrenaline. The release of noradrenaline then stimulates the process of thermogenic fatty acid oxidation within BAT, which has the unique capacity of uncoupling the normally linked process of fatty acid oxidation with cellular energy production in the form of ATP. Consequently, the energy is

instead directly converted into heat, which effectively increases energy expenditure.

Several studies looking at the impact of capsaicin on metabolic rate have shown that capsaicin does enhance energy expenditure while boosting fat oxidation, promoting significant weight loss.^{3,4} It has also been shown that the positive influence of capsaicin on thermogenesis is greatest in those people with the most BAT⁵, and there is some evidence indicating that sustained intake of capsaicin can increase BAT levels in humans⁶ — meaning that long-term capsaicin intake could boost BAT levels, improving the capacity to thermogenically burn body fat.

CURB YOUR APPETITE

The consumption of capsaicin can also reduce appetite and food intake², further supporting the ability to lose weight— and, perhaps more importantly, keep it off for good. Although the appetite-suppressing effect of capsaicin has been observed in several trials, it is not entirely understood how capsaicin reduces appetite. That said, some details have been uncovered with the release of noradrenaline triggered by capsaicin, as previously mentioned, appearing to contribute to the reduction in appetite— as the stimulation of the noradrenaline receptors in the brain has been shown to produce feelings of satiety.⁷ In addition, capsaicin intake has also been shown to cause an increase in the gut-derived hormone glp-1, which turns on regions of the brain that diminish food intake by reducing hunger.⁸ Moreover, this effect appears to be TRPV1-dependent, as the hunger-reducing impact of capsaicin was absent in mice that were genetically altered so they could not produce the TRPV1 receptor in gastrointestinal cells.

THE BETTER BCAA™

ELECTROLYTES & PATENTED L-ALANYL-L-GLUTAMINE

8:1:1

BCAA RATIO

(Branched-Chain Amino Acid Ratio)

15

GRAMS
AMINO ACIDS

Φ

8:1:1

0

ZERO
ARTIFICIAL COLORS
CALORIES
SUGAR



www.USPLabsDirect.com



Copyright USP Labs, LLC. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease. Information in this ad should not be used as an indication or prediction of your individual results. These products are meant to be used in conjunction with a proper nutrition & exercise program. Your results are completely dependent upon the amount of effort you put into it, which includes eating & exercising properly. You should consult your healthcare practitioner before beginning any such plans. All examples are for illustrative purposes only. USP Labs is not affiliated with, and its products are not endorsed by, the United States Pharmacopoeia, Rockville, MD. Endorsers began their relationship with USP Labs as product users before endorsing the company. USP Labs Endorsers may have been remunerated for their endorsement.

Math Taylor // TEAM USPLABS ATHLETE™

"USP Labs" Endorsers may have been remunerated for their endorsement.

GNC
LIVE WELL

V the Vitamin Shopper
every body's vitamin

LUCKY VITAMIN

100%

LOVE LOST



Long-term capsaicin intake could boost BAT levels, improving the capacity to thermogenically burn body fat.

Overall, studies have shown that the consumption of capsaicin does decrease hunger³, as capsaicin-treated subjects typically report a reduced desire to eat while also achieving greater satiety after meals.

IMPROVE CARDIOVASCULAR HEALTH

Research has also demonstrated that capsaicin can improve cardiovascular health by decreasing cholesterol levels while simultaneously triggering systemic vasodilation, which altogether improves blood flow—supporting superior cardiovascular health.

Capsaicin lowers cholesterol levels in the blood in two different ways. The first approach being TVPVI-independent, where capsaicin intake increases the production of bile acids—which have the unique capacity to interact with and clear cholesterol from the blood, effectively lowering cholesterol levels.⁹ It has also been shown that capsaicin activation of the TRPV1 receptor in smooth muscle cells lining the arterial wall significantly reduced the accumulation of cholesterol and other lipids within the arteries by increasing cholesterol efflux out of these cells, while also reducing cholesterol uptake into these cells.¹⁰ In fact, in mice models prone to getting plaque buildup within the arteries, dietary capsaicin was shown to slow down the accumulation of plaque within the arteries.¹¹

In addition to its capacity to reduce cholesterol, dietary intake of capsaicin also increases the expression and activity of the enzyme nitric oxide synthase¹², resulting in an increase in levels of the signaling molecule nitric oxide (NO)—which then stimulated vasodilation, and blood flow, in mice.¹³ Furthermore, the use of capsaicin patches in humans with mild coronary artery disease showed better cardiovascular function while exercising, compared to when the same subjects received the placebo patch with no capsaicin.¹⁴ Interestingly, use of the capsaicin patch during this study increased serum NO, which improved blood flow to the working muscles and heart for improved overall exercise performance.

ANTIOXIDANT AND ANTI-INFLAMMATORY EFFECTS REDUCE DISEASE

Another positive impact that capsaicin has on overall health is its exceptional capacity to uncouple the normal metabolic process of macronutrient oxidation with energy production throughout the body. While this capability can be used to increase energy expenditure by thermogenesis in BAT, in other tissues such as the liver and heart, the uncoupling of energy production to the oxidation of fats and carbohydrates can improve health by reducing the production of superoxide free radicals that are normally produced by this process. This is particularly the case when oxidation rates are very high, overwhelming the oxidative machinery within the cell and ultimately resulting in greater levels of superoxide free radical production.^{15,16}

Reduction of superoxide free radical production within the above-mentioned tissues diminishes the amount of free radical damage to essential biomolecules that are required for normal cellular function, such as DNA. Free radical damage causes essential biomolecules to malfunction, which promotes the disease state. The accumulation of oxidative damage from these superoxide free radicals also stimulates a devastating immune response that leads to chronic inflammation, further promoting the disease state.^{17,18} Consequently, the ability of capsaicin to extinguish free radical damage diminishes oxidative damage to key biomolecules, reducing long-term inflammation and thus the development of chronic disease—demonstrating one more way that this miraculous compound supports better health and well-being.

For more information on capsaicin go to advancedmolecularlabs.com. ■

For most of Michael Rudolph's career he has been engrossed in the exercise world as either an athlete (he played college football at Hofstra University), personal trainer or as a research scientist (he earned a B.Sc. in Exercise Science at Hofstra University and a Ph.D. in Biochemistry and Molecular Biology from Stony Brook University). After earning his Ph.D., Michael investigated the molecular biology of exercise as a fellow at Harvard Medical School and Columbia University for over eight years. That research contributed seminally to understanding the function of the incredibly important cellular energy sensor AMPK—leading to numerous publications in peer-reviewed journals including the journal *Nature*. Michael is currently a scientist working at the New York Structural Biology Center doing contract work for the Department of Defense on a project involving national security.

References:

1. Lv J, et al. Consumption of spicy foods and total and cause specific mortality: population based cohort study. *Bmj* 2015;351: p. h3942.
2. Whiting S, Derbyshire E and Tiwari BK. Capsaicinoids and capsinoids. A potential role for weight management? A systematic review of the evidence. *Appetite* 2012;59(2): p. 341-8.
3. Ludy MJ, Moore GE and Mattes RD. The effects of capsaicin and capsiate on energy balance: critical review and meta-analyses of studies in humans. *Chem Senses* 2012;37(2): p. 103-21.
4. Whiting S, Derbyshire EJ and Tiwari B. Could capsaicinoids help to support weight management? A systematic review and meta-analysis of energy intake data. *Appetite* 2014;73: p. 183-8.
5. Yoneshiro T, et al. Nonpungent capsaicin analogs (capsinoids) increase energy expenditure through the activation of brown adipose tissue in humans. *Am J Clin Nutr* 2012;95(4): p. 845-50.
6. Yoneshiro T and Saito M. Transient receptor potential activated brown fat thermogenesis as a target of food ingredients for obesity management. *Curr Opin Clin Nutr Metab Care* 2013;16(6): p. 625-31.
7. Westerterp-Plantenga MS, Smeets A and Lejeune MP. Sensory and gastrointestinal satiety effects of capsaicin on food intake. *Int J Obes (Lond)* 2005;29(6): p. 682-8.
8. Wellman PJ. Norepinephrine and the control of food intake. *Nutrition* 2000;16(10): p. 837-42.
9. Huang W, et al. Capsaicinoids but not their analogue capsinoids lower plasma cholesterol and possess beneficial vascular activity. *J Agric Food Chem* 2014;62(33): p. 8415-20.
10. Ma L, et al. Activation of TRPV1 reduces vascular lipid accumulation and attenuates atherosclerosis. *Cardiovasc Res* 2011;92(3): p. 504-13.
11. Ching, L.C., et al. Molecular mechanisms of activation of endothelial nitric oxide synthase mediated by transient receptor potential vanilloid type 1. *Cardiovasc Res* 2011;91(3): p. 492-501.
12. Lo YC, et al. A novel capsaicin derivative VOA induced relaxation in rat mesenteric and aortic arteries: involvement of CGRP, NO, cGMP and endothelium-dependent activities. *J Cardiovasc Pharmacol* 2003;42(4): p. 511-20.
13. Yang D, et al. Activation of TRPV1 by dietary capsaicin improves endothelium-dependent vasorelaxation and prevents hypertension. *Cell Metab* 2010;12(2): p. 130-41.
14. Fragasso G, et al. Nitric oxide-mediated effects of transdermal capsaicin patches on the ischemic threshold in patients with stable coronary disease. *J Cardiovasc Pharmacol* 2004;44(3): p. 340-7.
15. Negre-Salvayre A, et al. A role for uncoupling protein-2 as a regulator of mitochondrial hydrogen peroxide generation. *FASEB J* 1997;11(10): p. 809-15.
16. Eghtay KS, et al. Superoxide activates mitochondrial uncoupling proteins. *Nature* 2002;415(6867): p. 96-9.
17. Haffner SM. The metabolic syndrome: inflammation, diabetes mellitus and cardiovascular disease. *Am J Cardiol* 2006;97(2A): p. 3A-11A.
18. Lin WW and Karin M. A cytokine-mediated link between innate immunity, inflammation and cancer. *J Clin Invest* 2007;117(5): p. 1175-83.

PROLAB®
PERFORMANCE SIMPLIFIED

DEFY



CAFFEINE FAST DISSOLVE

- 200mg of Pure Caffeine
- Increase Energy and Endurance†
- Improves Mental Focus†
- ZERO Sugar or Calories†



CREATINE MONOHYDRATE

- 5 grams of Pure Micronized Creatine Monohydrate Per Serving†
- Maximizes Muscular Development†
- Drives Explosive Muscle Power†
- Helps Speed Recovery Between Sets†



BETA ALANINE EXTREME

- Delays Muscle Fatigue††
- Buffers Against Lactic Acid Buildup†
- Helps Extend Workout Intensity†
- Increases Muscle Carnosine†

PROLAB® Is Performance Supplements...Simplified.



prolab.com

†These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.

© 2015 PROLAB, Inc.

MUSCULAR PERFORMANCE

BENEFITS OF CAFFEINE

Caffeine can be an essential component to a successful training regimen, especially when you're too tired to even go to the gym.



Caffeine is quite possibly the most consistently used drug in the world. With the ability to abolish fatigue and increase wakefulness, caffeine makes the world go 'round. Everyone from truck drivers, airline pilots, soldiers or even surgeons like me bank on caffeine at some point. Caffeine's effects last for up to six hours, and some people may become so dependent that they experience withdrawal symptoms of fatigue, headaches and flu-like symptoms when they forget their cup o' joe in the morning.

Caffeine is heavily used in sports nutrition products intended for fat

loss and pre-workout stimulation. There are numerous studies that suggest that caffeine can improve power and strength performance and endurance.^{1,2} Though, the more ambiguous results seen in a few studies could be related to methodological errors and problems with test-subject controls.

For instance, some studies try to clear caffeine from the system prior to the study, which may just lead to a recovery from withdrawal symptoms rather than enhancement of performance. Although withdrawal itself doesn't seem to cause a sports performance deficit, it certainly causes headaches, fatigue, loss of short-term memory and mood depression. Furthermore, some research studies may not

account for test subjects who regularly use caffeine or may even be, dare I say, naïve to its effects, therefore making them more sensitive to its effects. Either way, this leads to confounding variables that result in inconsistent results across the board.

Studies suggest that a relatively low dose of three milligrams per kilogram of bodyweight is adequate to experience performance-enhancing benefits. In a 150-pound person, that is only ~200 milligrams of caffeine. Interestingly, despite performance enhancement, very little metabolic changes occur at this dose. Based on a few studies, it seems that the better seasoned you are as an athlete, the more effective acute doses of caffeine seem to become.⁶ Doses of six milligrams per kilogram are more commonly used, and may be more effective for strength athletes (400 mg of caffeine in a 150-pound person). Exceeding these doses may lead to unpleasant jitters, nausea and difficulty focusing on tasks.

QUESTIONS ABOUT TIMING

The timing of caffeine consumption is a hot topic of debate, as it is really uncertain from human studies as to how caffeine actually improves performance. In the case of endurance athletes, it is thought that they enhance mobilization of fats from stores and thus provide more fuel for muscles to burn. Muscle glycogen is spared in moderate exercise after ingestion of caffeine at five to nine milligrams per kilogram of bodyweight. There is little evidence to support a metabolic component like this for enhancing performance at a low caffeine dose (3 mg/kg). Thus, it appears that alterations in muscle metabolism alone cannot fully explain the ergogenic effect of caffeine during endurance exercise in low doses.

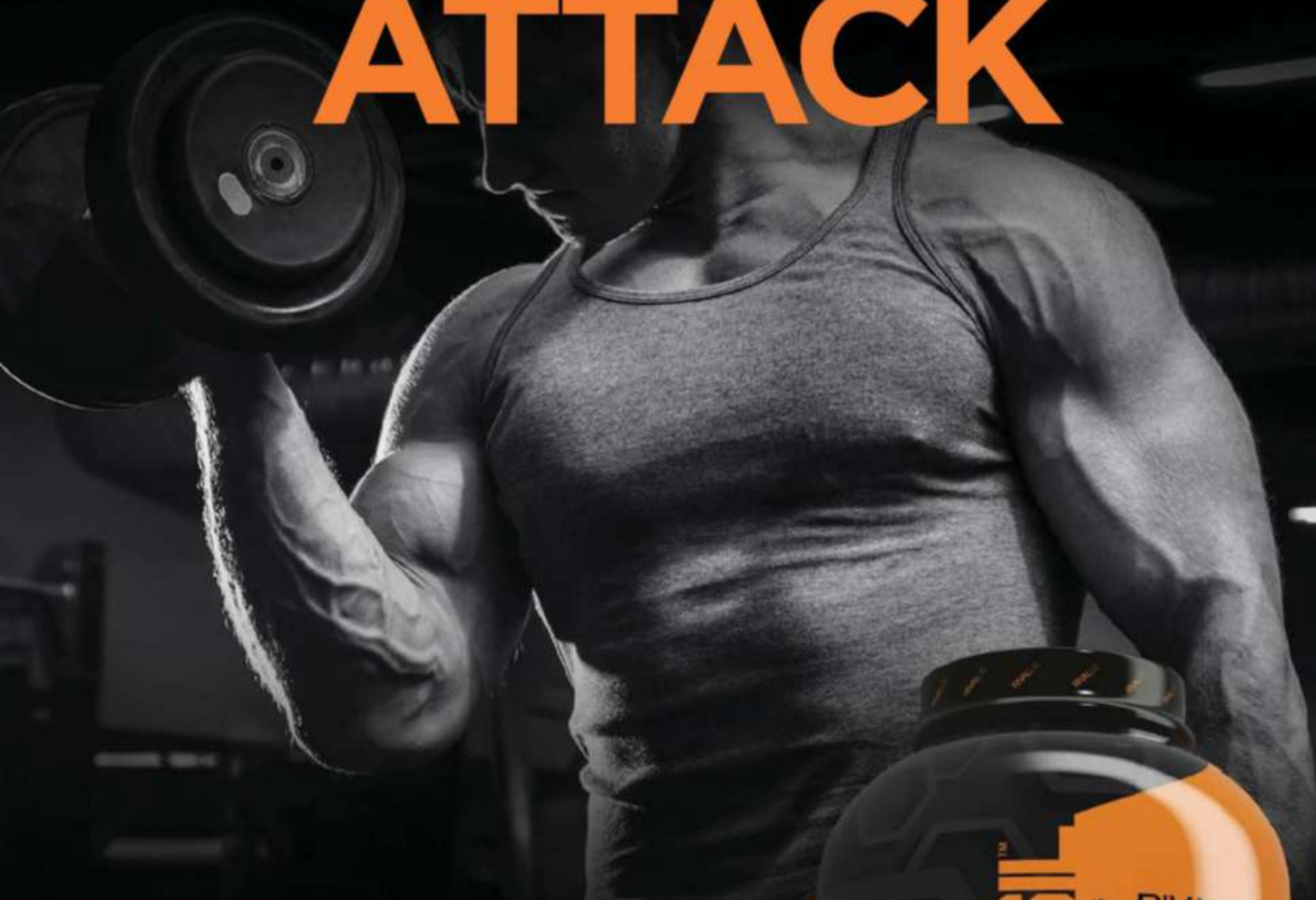
To put this into perspective, three milligrams per kilogram of bodyweight of caffeine is equivalent to approximately two cups (~8 oz) of coffee; and nine milligrams per kilogram equals approximately five to six regular size cups of coffee. It is important to note that we all metabolize and respond to drugs differently; you may have to experiment with the right dose for your training.

In addition to ergogenic effects on endurance exercise, caffeine has been shown to increase performance in 60- to 180-second sprints and high-intensity intermittent exercise.¹ Since this type of exercise rarely involves the use of fat for fuel, the mobilization of fat to spare glycogen theory doesn't work well for caffeine's ability to improve short duration performance. Science suggests that caffeine's effects on the central nervous system may play a significant role here.³ The arousal effects and even a slight blunting of pain perception that comes with caffeine may explain the ability to push harder in short-duration activities (i.e., maximal lifting or sprinting).

In reality, it is very difficult to determine the effects of caffeine on human muscle. Studies in animals and isolated muscle preparations have provided us some insight into how caffeine enhances performance. At physiological concentrations, caffeine appears to increase the ability of muscle to produce work, force and power. It may even be that caffeine increases the performance of slow-twitch endurance muscle fibers two times more than fast-twitch strength fibers (increased by 6% and 3%, respectively).⁷ This may be an explanation for improvements in endurance training and competition. Given

RIVALUS™
WE'RE PRO-ATHLETE

STACK & ATTACK



ADD SOME POP TO YOUR WORKOUT

1. ATTACK THE GYM

Put some fire in your pre-workout with a scoop of POWDERBURN 2.0 for extra energy & focus.

2. FINISH STRONG

Bring it home with PROMASIL – one of the strongest-performing proteins for top athletes.



PRO & OLYMPIC ATHLETE TRUSTED WORLDWIDE
100% WADA 100% IOC COMPLIANT



AVAILABLE AT:

GNC
LIVE WELL



RIVALUS™
WWW.RIVALUS.NET

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.



at high enough doses in muscle tissue preparations, it appears that caffeine can actually make muscle contract without direct stimulation.⁵ How caffeine does this is still being explored.

The timing of caffeine consumption is also up for debate. First of all, caffeine consumption in the form of coffee or other liquids seems to be more rapidly absorbed than pill form. Thus, you can get caffeine into your system with a peak at ~40 minutes versus ~60 minutes as a pill.⁸ Further, it seems that the effects of caffeine work longer in non-regular consumers of caffeine beverages. In one study, the effects of five milligrams per kilogram of bodyweight lasted up to six hours in non-regular consumers, versus only one to three hours in regular consumers.⁹ Based on these results, it seems it would be best to have your caffeine at ~6 milligrams per kilogram (400 mg, or a Grande to Venti coffee) about one hour before your training.

SAFETY CONCERNS

Recent editorials in medical journals such as the *Journal of the American Medical Association* have warned of excessive use of these caffeinated beverages, especially as mixers in alcoholic beverages.⁴ Alcohol and certain medications can prolong the otherwise normal five-hour half-life of caffeine, thus increasing chances of toxicity. It is suggested that three to 10 grams (140mg/kg bodyweight) of caffeine consumed in a brief period of time could be lethal. This would be about 75 cups of coffee, or 200 cans of Coke. It's notable that prospective longitudinal studies have shown no increases in cardiovascular disease risk with up to six cups of regular coffee per day.⁵

Caffeine is also a diuretic and can increase urine output within one hour of consumption. If there is a chance that you may be dehydrated (i.e., warm weather training), caffeine consumption should be limited until adequate hydration is available. Studies performed by the United States military on the safety of regular caffeine usage by soldiers demonstrated relative safety of caffeine dosed between 100 to 600 milligrams.⁵ It is recommended that a 600-milligram limit not be

exceeded, unless strongly habituated to the use of caffeine. When consuming close to 600 milligrams of caffeine per day, it should be divided into two to three servings throughout the day. When taking any new supplements containing caffeine, you should attempt a "tolerance test." That is, you should try taking half or less of the serving size on first try, to test for any adverse reactions. If you tolerate the partial dose, slowly increase it until the desired effect is obtained.

Caffeine can be an essential component to a successful training regimen, especially when you're too tired to even go to the gym. Caffeine consumption (3-9 mg/kg) prior to exercise increases performance during endurance and short-term, intense exercise. Caffeine can help you increase your training efficacy and recovery. Caffeine supplements are an especially great way to boost your training when dieting for a bodybuilding competition. As with any supplement, caffeine must be used in moderation to avoid potentially serious side effects. Strictly avoid mixing energy drinks into your alcoholic cocktails. Use your caffeine supplements to excite your mind and body in the gym, not the bar.

References:

1. Davis JK, Green JM. Caffeine and anaerobic performance: ergogenic value and mechanisms of action. *Sports Med* 2009;39(10):813-32.
2. Burke JM. Caffeine and sports performance. *Appl Physiol Nutr Metab* 2008;Dec;33(6):1319-34.
3. Motl RW, et al. Effect of caffeine on leg muscle pain during cycling exercise among females. *Med Sci Sports Exerc* 2006; 38: 598-604.
4. Sepkowitz KA. Energy Drinks and Caffeine-Related Adverse Effects. *JAMA* 2013;309(3):243-244.
5. Committee on Military Nutrition Research. Caffeine for the Sustainment of Mental Task Performance: Formulations for Military Operations. National Academy Press Washington DC 2001.
6. Tallis J, et al. What can isolated skeletal muscle experiments tell us about the effects of caffeine on exercise performance? *Br J Pharmacol* 2015 Aug;172(15):3703-13.
7. Tallis J, et al. The effect of physiological concentrations of caffeine on the power output of maximally and submaximally stimulated mouse EDL (fast) and soleus (slow) muscle. *J Appl Physiol* (1985). 2012 Jan;112(1):64-71. *J Appl Physiol* (1985). 2012 Jan;112(1):64-71.
8. Liguori A, et al. Absorption and subjective effects of caffeine from coffee, cola and capsules. *Pharmacol Biochem Behav* 1997 Nov;58(3):721-6.
9. Bell DG, McLellan TM. Exercise endurance 1, 3, and 6 h after caffeine ingestion in caffeine users and nonusers. *J Appl Physiol* (1985). 2002 Oct;93(4):1227-34.

THE ORTHOFACTOR: GET MOBILE

By Victor R. Prisk, M.D.

I consider mobility to be the ability to move freely without residual pain in your joints, muscles and mind. That's right, I said "mind." Please let me elaborate. Our mobility is determined by three factors: mind, body and metabolism. My supplement, The OrthoFactor, addresses all of these factors. Neglecting just one of these results in less-than-optimal performance of your typical "joint" or "recovery" supplement.

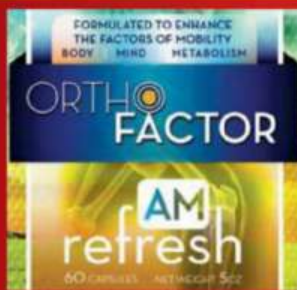
Our minds or our attitudes affect our ability to move in the morning and train later in the day. Feelings of fatigue, either from work stress or slight overtraining, make us lose motivation and make it difficult for us to go heavy in the gym. When we are mentally stressed, our performance in the gym and even the bed suffers. Thus, The OrthoFactor AM Refresh provides a long-acting unique ingredient called TeaCrine[®] derived from kucha tea to reduce fatigue, limit stress, reduce perceived exertion and limit pain.^{1,2,3} TeaCrine demonstrates anti-inflammatory, analgesic and caffeine-like effects, without having the desensitizing effects of long-term use as caffeine does. A pilot study has also demonstrated improved energy, reductions of fatigue, improved motivation and libido⁴! With further anti-inflammatory CurcuWIN and joint-sparing BioCell Collagen, the AM Refresh formula is spot-on.

The OrthoFactor PM Restore further improves the mind component by helping relieve feelings of stress and anxiety through the

supplement L-theanine, while improving sleep quality with melatonin.^{5,6} Sleep is a critical time to boost metabolic and muscle mobility via anabolic hormone production, particularly growth hormone. Melatonin has been shown to be a strong antioxidant and a booster of growth hormone production.⁵ Furthermore, HMB improves muscle recovery and protects from muscle breakdown, while undenatured type II collagen (UCII) limits immune system damage of articular cartilage in joints.^{7,8}

This is the most complete mobility supplement ever created. I have become more mobile in my 40s than I was in my 30s using this product. Check it out at OrthoFactor.com. ■

**"I HAVE
BECOME MORE
MOBILE IN MY
40s THAN I
WAS IN MY 30s
USING THIS
PRODUCT."**



References:

1. Wang Y, et al. Theacrine, a purine alkaloid with anti-inflammatory and analgesic activities. *Fitoterapia* 2010 Sep;81(6):627-31.
2. Feduccia AA, et al. Locomotor activation by theacrine, a purine alkaloid structurally similar to caffeine: involvement of adenosine and dopamine receptors. *Pharmacol Biochem Behav* 2012;Aug;102(2):241-8.
3. Li WX, et al. Theacrine, a purine alkaloid obtained from *Camellia assamica* var. kucha, attenuates restraint stress-provoked liver damage in mice. *J Agric Food Chem* 2013;Jul 3;61(26):6328-35.
4. SM Habowski, et al. The effects of Theacrine, a nature-identical purine alkaloid, on subjective measures of cognitive function, psychometric and hemodynamic indices in healthy humans: a randomized, double-blinded crossover pilot trial. *Journal of the International Society of Sports Nutrition* 2014;11(Suppl 1):P49.
5. Nassar E, et al. Effects of a single dose of N-Acetyl-5-methoxytryptamine (Melatonin) and resistance exercise on the growth hormone/IGF-1 axis in young males and females. *J Int Soc Sports Nutr* 2007; 4: 14.
6. Vuong QV, et al. L-Theanine: properties, synthesis and isolation from tea. *J Sci Food Agric* 2011 Aug 30;91(11):1931-9.
7. Wilson JM, et al. International Society of Sports Nutrition Position Stand: beta-hydroxy-beta-methylbutyrate (HMB). *J Int Soc Sports Nutr* 2013 Feb 2;10(1):6.
8. Lugo JP, et al. Undenatured type II collagen (UC-II[®]) for joint support: a randomized, double-blind, placebo-controlled study in healthy volunteers. *J Int Soc Sports Nutr* 2013 Oct 24;10(1):48.

RIVALUS™
WE'RE PRO-ATHLETE

REALLY WANT TO SEE AN ATHLETE SWEAT?

TAKE AWAY HIS PROMASIL

And now for you more naturally inclined athletes, we have a powerful new protein option – Naturally Flavored PROMASIL.



TIMED-RELEASE
PROTEINS

WHEY ISOLATE
WHEY HYDROLYSATE
MILK ISOLATE
WHEY CONCENTRATE
GOAT'S MILK
EGG ALBUMEN
MICELLAR CASEIN

INGREDIENT
1

**WHEY
PROTEIN
ISOLATE**

SUGAR
FAT



PRO & OLYMPIC ATHLETE TRUSTED WORLDWIDE
100% WADA IOC COMPLIANT



AVAILABLE AT:



Check us out & get samples at www.rivalus.net



TURNING UP THE HEAT? OR COLD? FOR MUSCLE STRENGTH AND GROWTH

The standard response to speed up the recovery process after heavy weight training typically involves the application of either cold (cryotherapy) or heat (thermotherapy) to the sore muscle groups. Cryotherapy reduces the temperature of the contacted area, causing constriction of the blood vessels, or vasoconstriction—which reduces blood flow to the area. This, in turn, reduces the release of inflammatory cells to the site, minimizing overall inflammation, which can promote healing.

Thermotherapy, on the other hand, actually triggers a small amount of inflammation required to repair the exercised muscle by inducing vasodilation, thus increasing the flow of blood and certain immunological cells to the area. The increase in immune cells to the area facilitates muscle tissue repair by removing damaged cells and additional cellular debris. Because of the different influence that each therapeutic approach has on vascular and immune system function, they are both applied at different times relative to training, with cryotherapy usually applied right after exercise and thermotherapy applied at a later point in time.

Despite the different physiological response by the body to cold or heat therapy, along with the different temporal use of each relative to the time of exercise, the scientific evidence shows that the use of either modality similarly reduces exercise-induced delayed onset muscle soreness (DOMS).^{1,2,3} This benefit makes the use of either seem like a good way to alleviate muscle soreness, and that it simply depends on which approach you prefer the most. However, if you're trying to

maximize exercise performance, then you should certainly consider a few more recent studies showing that cold-based therapies appear to reduce the anabolic response to training^{4,5}, conceivably reducing the ability to pack on muscle mass, while the application of heat has been shown to increase activity of the muscle-building molecule mTOR—indicating that the preferential use of heat therapy instead of cold therapy will generate superior gains in size and strength.

CRYOTHERAPY FREEZES MUSCLE ANABOLISM

Resistance training induces muscle growth and strength by stimulating the release of certain anabolic hormones such as growth hormone (GH), insulin-like growth factor 1 (IGF-1) and testosterone. Growth hormone is a protein molecule that triggers several biochemical-signaling cascades that promote an anabolic environment. One of the primary ways that GH triggers muscle growth is by triggering the production of IGF-1, which produces muscle growth by increasing muscle cell protein synthesis. Testosterone boosts muscle growth by activating the androgen receptor, which also stimulates protein synthesis within muscle tissue, promoting muscle growth and strength.

Since several studies indicated that post-exercise cryotherapy decreased the adaptive response to resistance exercise as well as overall performance,^{4,6} a group of scientists from Israel wanted to see if this detrimental influence on performance was caused by decreased muscle growth in response cryotherapy.⁵ So, they investigated the effect of ice pack application on circulating levels of the key anabolic hormones GH, IGF-1 and testosterone. In order to do this, they had 12 highly trained male athletes perform several sprints on a treadmill at 80 percent of their maximum speed, followed by a rest period with or without the application of an ice pack on the trained leg muscles. Overall, this exercise protocol triggered the release of all three anabolic hormones, while the application of ice significantly reduced the level of each hormone. The results indicate that the use of cryotherapy after high-intensity training may hamper exercise performance to some degree, by inhibiting the anabolic process of muscle growth in response to the potent muscle-building hormones testosterone, GH and IGF-1.

Both cold or heat therapy similarly reduce muscle

soreness—enhancing the recovery process and permitting a quicker return to training that will certainly support greater gains and performance.

TURN UP THE HEAT FOR GREATER MUSCLE GROWTH

Muscle hypertrophy is characterized by an increase in muscle protein mass that is primarily due to greater levels of muscle protein synthesis. While resistance training and nutrition are two very effective ways to trigger muscle growth, the application of heat stress has also been shown to potentially increase muscle protein synthesis and muscle mass^{7,8,9}, suggesting that thermotherapy would have a very similar effect. The theory supporting the influence of heat application on muscle growth begins with the no-



THE CHOICE
IS CLEAR.

INTRA-MD & PARTITION-MD

- FORMULATED BY IFBB PRO JOHN MEADOWS -

CHOOSE TRUSTED QUALITY
CHOOSE PROVEN RESULTS
CHOOSE HONEST INGREDIENTS
CHOOSE GREATER RECOVERY
CHOOSE MAXIMUM ABSORPTION
CHOOSE THE BEST OR NOTHING



DPS
NUTRITION, INC.

PRIMENUTRITION
THE BEST OR NOTHING

B
BODYBUILDING.COM

MUSCLE GROWTH *update*

tion that increased temperature triggers the production of a certain type of protein known as the heat shock protein (HSP), which play a critical role assisting the production of newly synthesized proteins in the cell. This effectively increases the level of protein synthesis within the muscle cell, ultimately promoting muscle growth. However, it has also been reported¹⁰ that increasing levels of the heat shock protein Hsp72 does not trigger muscle growth, indicating that enhanced muscle protein synthesis from heat stress is likely caused by a different molecular, or cellular, mechanism. Considering the central role of mTOR signaling in upregulating protein synthesis, scientists believed that heat stress-related muscle hypertrophy was likely caused by activation of mTOR.

In order to see if this was the case, a study by Kakigi et al.⁹ looked at the effect that heat had on mTOR activity in eight young, male subjects who performed several sets of high-intensity knee extensions, either with or without the immediate post-exercise application of heat to the quadriceps muscle. Muscle biopsies of the quadriceps muscle showed a much greater level of mTOR activation in the muscle tissue that received the heat stress, indicating that the application of heat enhanced mTOR signaling, likely leading to a greater capacity to pack on muscle mass.

In summary, both cold or heat therapy similarly reduce muscle soreness—enhancing the recovery process and permitting a quicker return to training that will certainly support greater gains and performance over the long term. However, the application of cryotherapy post-workout appears to have one significant drawback relative to thermotherapy. That shortcoming being the capacity to lower levels of very important anabolic hormones, which will most definitely hinder the ability to increase muscle mass and strength. On the other hand, the use of thermotherapy, by itself or in combination with resistance training, enhances the rate of muscle protein synthesis, ultimately improving the ability to pack on muscle. ■

For most of Michael Rudolph's career he has been engrossed in the exercise world as either an athlete (he played college football at Hofstra University), personal trainer or as a research scientist (he earned a B.Sc. in Exercise Science at Hofstra University and a Ph.D. in Biochemistry and Molecular Biology from Stony Brook University). After earning his Ph.D., Michael investigated the molecular biology of exercise as a fellow at Harvard Medical School and Columbia University for over eight years. That research contributed seminally to understanding the function of the incredibly important cellular energy sensor AMPK—leading to numerous publications in peer-reviewed journals including the journal *Nature*. Michael is currently a scientist working at the New York Structural Biology Center doing contract work for the Department of Defense on a project involving national security.

References:

1. Lane KN and Wenger HA. Effect of selected recovery conditions on performance of repeated bouts of intermittent cycling separated by 24 hours. *J Strength Cond Res* 2004;18(4): p. 855-60.
2. Yanagisawa O, et al. The effects of various therapeutic measures on shoulder strength and muscle soreness after baseball pitching. *J Sports Med Phys Fitness* 2003;43(2): p. 189-201.
3. Mayer JM, et al. Continuous low-level heat wrap therapy for the prevention and early phase treatment of delayed-onset muscle soreness of the low back: a randomized controlled trial. *Arch Phys Med Rehabil* 2006;87(10): p. 1310-7.
4. Howatson G, Gaze D and van Someren KA. The efficacy of ice massage in the treatment of exercise-induced muscle damage. *Scand J Med Sci Sports* 2005;15(6): p. 416-22.
5. Nemet D, et al. Effect of local cold-pack application on systemic anabolic and inflammatory response to sprint-interval training: a prospective comparative trial. *Eur J Appl Physiol* 2009;107(4): p. 411-7.
6. Richendollar ML, Darby LA, and Brown TM. Ice bag application, active warm-up, and 3 measures of maximal functional performance. *J Athl Train* 2006;41(4): p. 364-70.
7. Goto K, et al. Effects of heat stress and mechanical stretch on protein expression in cultured skeletal muscle cells. *Pflugers Arch* 2003;447(2): p. 247-53.
8. Uehara K, et al. Heat-stress enhances proliferative potential in rat soleus muscle. *Jpn J Physiol* 2004;54(3): p. 263-71.
9. Kakigi R, et al. Heat stress enhances mTOR signaling after resistance exercise in human skeletal muscle. *J Physiol Sci* 2011;61(2): p. 131-40.
10. Frier BC and Locke M. Heat stress inhibits skeletal muscle hypertrophy. *Cell Stress Chaperones* 2007;12(2): p. 132-41.

SAVE UP TO 75%

EVERYDAY LOWEST PRICES ON ALL TOP BRANDS

ORDER TODAY AT PROSOURCE.NET OR CALL 1-800-310-1555

PROSOURCE.NET
AMERICA'S SPORTS SUPPLEMENT SUPERSTORE—SINCE 1996

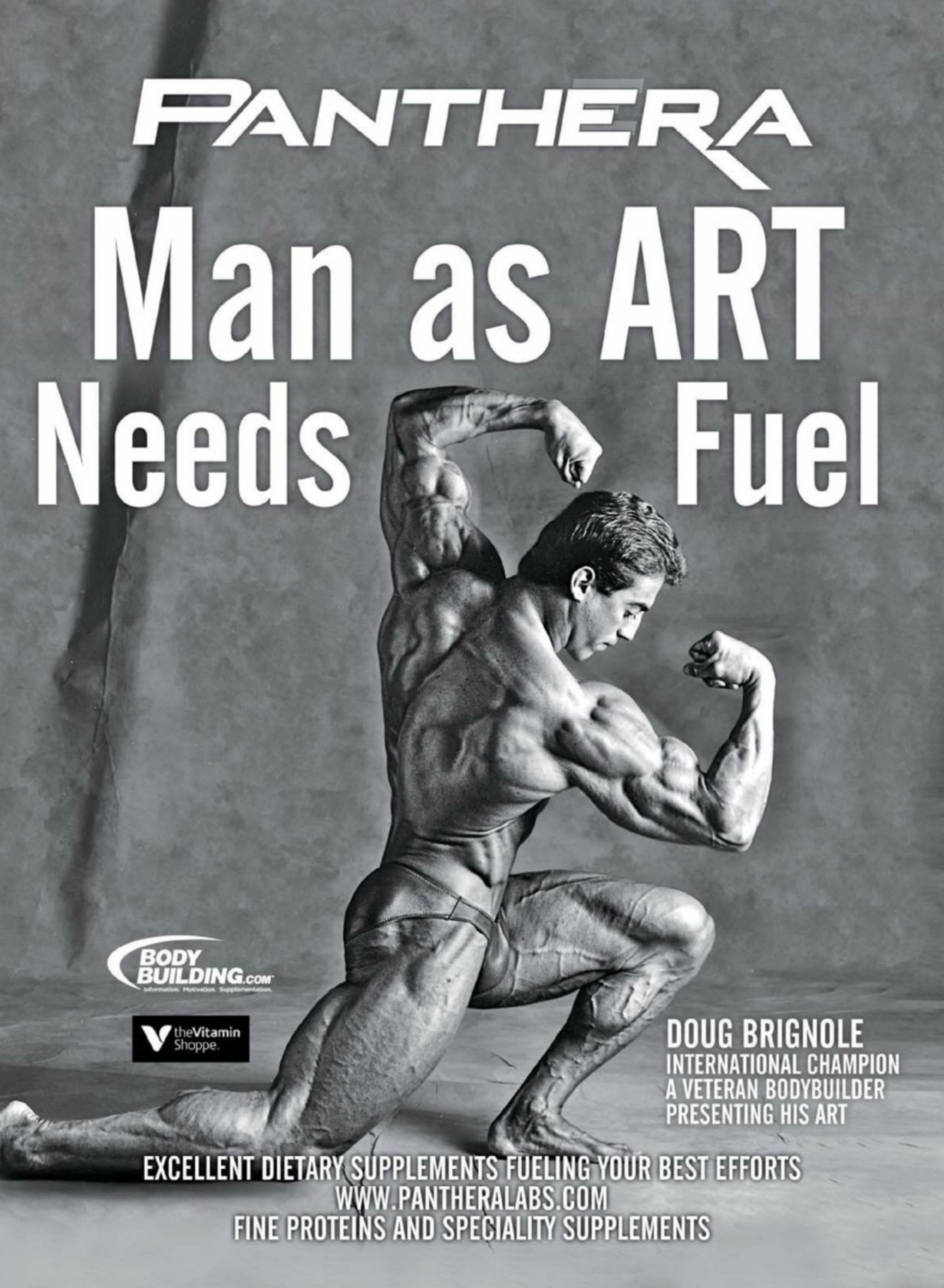
MUSCLETECH **MP** **ON** **88** **CELLUCOR** **hpi** **BioQuest** **MHP**

© 2015 ProSource Performance Products, Inc. All Rights Reserved. Prices and offers subject to change. Some restrictions may apply.

PANTHERA

Man as ART

Needs Fuel



**BODY
BUILDING.COM**
Information. Motivation. Supplementation.

V theVitamin
Shoppe.

DOUG BRIGNOLE
INTERNATIONAL CHAMPION
A VETERAN BODYBUILDER
PRESENTING HIS ART

EXCELLENT DIETARY SUPPLEMENTS FUELING YOUR BEST EFFORTS
WWW.PANTHERALABS.COM
FINE PROTEINS AND SPECIALITY SUPPLEMENTS

IS A WARM-UP NECESSARY BEFORE LIFTING?



It's pretty much taken as gospel that you should warm up prior to working out. Warming up is associated with an array of physiological changes, including an enhanced circulation to muscles, increased transmission of nerve impulses, better oxygen and energy substrate delivery to working muscles and accelerated removal of metabolic waste.⁷ These alterations are claimed to enhance exercise performance as well as reduce the risk of exercise-related injury. Virtually every exercise physiology textbook and fitness professional says so.

The warm-up consists of two basic components: general and specific. The general warm-up involves performing a brief bout of low-intensity cardio such as cycling, jogging or calisthenics.⁶ Its primary objective is to elevate core temperature and increase blood flow to

the musculature. A direct correlation between muscle temperature and exercise performance exists, whereby a warm muscle elicits a stronger muscular contraction. As a general rule, the higher a muscle's temperature (within a safe physiologic range), the stronger its contractility. Theoretically, the associated increase in force production should translate into higher mechanical tension on muscle fibers, and thus induce better muscular development.

The specific warm-up is essentially an extension of the general warm-up. By using exercises that are similar to those in the workout, a specific warm-up allows you to "rehearse" the actual exercise being performed, which seemingly helps to enhance performance during your working sets.⁶ As such, the exercises used in the specific warm-up should mimic the

actual movements in the workout as closely as possible. The only difference is that warm-up performance is carried out at a low intensity (~50% of one repetition maximum or 1RM), with the set stopped well short of fatigue.

Despite the apparently sound rationale behind this practice, research supporting beneficial effects of warming up has largely focused on performance in athletic endeavors such as jumping and sprinting.^{2,3} And while there is some evidence showing that a warm-up helps to improve low-rep sets designed to increase maximal strength¹, no previous studies had directly investigated how it affects moderate-rep, bodybuilding-type training; any perceived benefits associated with such training were based on logical speculation.

Until now.

To address the gaps in the literature, I recently collaborated with colleagues from Brazil to determine whether a warm-up is indeed beneficial for performance during moderate-rep training.⁴ Subjects were 15 young, “recreationally trained” men (i.e., less than a year of consistent lifting experience). The study employed a within-subject design, where each subject carried out four exercise bouts separated by 48-72 hours between sessions. Subjects performed a different warm-up strategy prior to each workout, including a general warm-up, a specific warm-up, a combination general and specific warm-up or no warm-up. The aerobic warm-up consisted of 10 minutes of light cycling exercise at a speed of 40 kilometers per hour, while the specific warm-up consisted of a light set (10 reps at 50% 1RM) of the specific exercise to be performed. The order of the warm-ups was counterbalanced between subjects to ensure that this variable did not unduly influence results. The workouts involved four sets of the bench press, squat and arm curl at an intensity equating to 80 percent of 1RM. Subjects were pushed to the point of momentary muscular failure on each set.

Somewhat surprisingly, results showed no significant differences between the number of reps performed in any of the warm-up conditions. Moreover, there also was no difference in the fatigue index, which is a formula that calculates the decline in the number of reps across the first and last sets of each exercise.

When taking the totality of these findings into account, it is tempting to conclude that a warm-up—whether it be general or specific—has little if any effect on enhancing performance of moderate-rep training. This would seem to make intuitive sense, given that the first few reps of a moderate-load set actually function as their own specific warm-up—and the need to increase core temperature is likely superfluous from a performance standpoint when multiple reps are performed.

As is often the case, however, several things must be considered when applying research-based results into real-world practice. For one, while subjects had some basic resistance training experience, they weren’t well-trained lifters. Would highly skilled lifters have shown a different response to the protocol? Tough to say, but it’s certainly a possibility. If you already possess highly refined neuromuscular patterns for a given lift, it is at least feasible to speculate that even slight neural improvements derived from warming up could translate into better performance.

In addition, the type of exercise performed needs to be considered here. A closer scrutiny of the data did seem to show a mild advantage when a specific warm-up was performed prior to the squat, while there actually appeared to be a slight detriment to the specific warm-up in the biceps curl. Based on these observations, it can be inferred that exercises involving complex

movement patterns (such as the squat) would derive a benefit from the “practice effect” of a specific warm-up, while exercises that are more simplistic in nature (such as the biceps curl) would not.

Another consideration here is the absolute amount of weight lifted during an exercise. If you bench 350 pounds for reps, it’s reasonable to speculate that you might well benefit from a lighter set to a greater extent than someone who benches a buck fifty. Even though the “heaviness” of the load would be similar on a relative basis, the neural enhancements of performing a light, specific warm-up would potentially have a greater transfer when lifting the heavier, absolute weights.

Finally, these findings do not take into account the potential safety-related issues of warming up. An elevated core temperature reduces the resistance to flow (viscosity) of the synovial fluid in the joints.⁵ Not only does this help to increase the joints’ range of motion, it also decreases friction between tissues, which may in turn reduce the risk of a training-related injury. None of the participants in our study suffered an injury, but the short duration and relatively small number of subjects renders it impossible to draw conclusions in this regard. Despite the fact that lifting weights at sub-maximal intensities has a very low risk of injury, assuming you lift with proper technique, the possibility nevertheless exists that warming up may decrease this risk even further. This seems particularly relevant for experienced lifters, who will tend to use heavier, absolute loads.

So to sum things up, here’s what we can take home from the research. While a warm-up should always be performed prior to lifting very heavy, relative loads (say, 1-5RM), its importance when lifting lighter loads will be specific to your own individual situation. Since a warm-up takes a good 10 to 15 minutes to perform, you can probably skip the practice without experiencing any detrimental effects on exercise performance if you’re pressed for time. This is especially true for beginner or intermediate lifters, or if you’re working out with very light loads for high reps (greater than 15RM or so). Alternatively, highly experienced lifters using heavy, absolute loads would probably benefit from both a general and specific warm-up. If nothing else, it may possibly save your joints from the prospect of a training-related injury.

It’s also essential to note that research only reports averages between groups. As with virtually all studies, there were in fact between-subject differences in responses, whereby some participants showed a positive effect from warming up while others did not. Only through individual trial-and-error can you accurately assess whether a warm-up improves your own performance. Use science to guide decision-making; use experience to hone your approach in practice. ■



It is tempting to conclude that a warm-up—whether it be general or specific—has little if any effect on enhancing performance of moderate-rep training.

Brad Schoenfeld, Ph.D., CSCS, FNSCA, is widely regarded as one of the leading authorities on training for muscle development and fat loss. He has published over 70 peer-reviewed studies on various exercise- and nutrition-related topics. He is also the author of the best-selling book, *The MAX Muscle Plan*, and runs a popular website and blog at lookgreatnaked.com.

References:

1. Abad CC, Prado ML, et al. Combination of general and specific warm-ups improves leg-press one repetition maximum compared with specific warm-up in trained individuals. *J Strength Cond Res* 2011;25: 2242-2245.
2. Binnie MJ, Landers G and Peeling P. Effect of different warm-up procedures on subsequent swim and overall sprint distance triathlon performance. *J Strength Cond Res* 2012;26: 2438-2446.
3. Carvalho FL, Carvalho MC, et al. Acute effects of a warm-up including active, passive, and dynamic stretching on vertical jump performance. *J Strength Cond Res* 2012;26: 2447-2452.
4. Ribeiro AS, Romanzini M, et al. Effect of different warm-up procedures on the performance of resistance training exercises. *Percept Mot Skills* 2014;119: 133-145.
5. Safran MR, Seaber AV and Garrett WE Jr. Warm-up and muscular injury prevention. An update. *Sports Med* 1989;8: 239-249.
6. Shellock FG and Prentice WE. Warming-up and stretching for improved physical performance and prevention of sports-related injuries. *Sports Med* 1985;2: 267-278.
7. Thacker SB, Gilchrist J, et al. The impact of stretching on sports injury risk: a systematic review of the literature. *Med Sci Sports Exerc* 2004;36: 371-378.

MUSCLEMEDS PRESENTS: CARNIVOR

WHEY TOO TIRED OF THE SAME OLD THING?

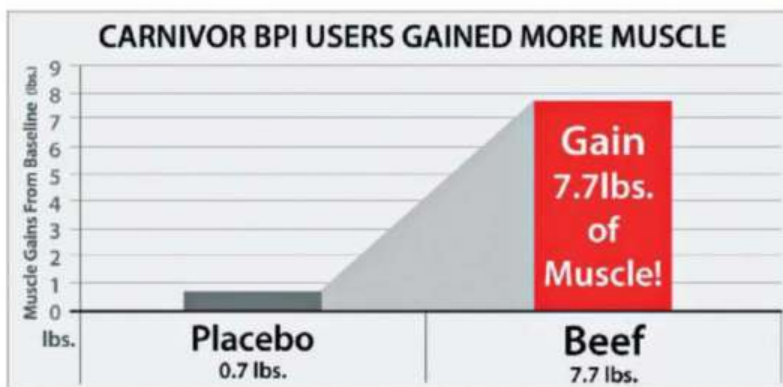
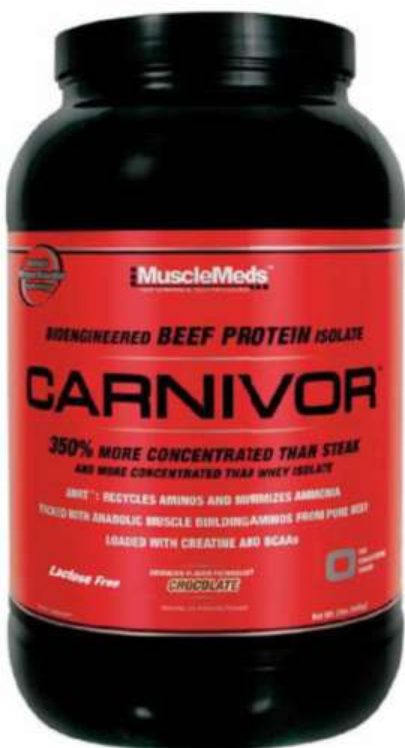
Whey protein has been a staple in most bodybuilders' supplement plans for over two decades. Hell, I have downed several thousand shakes over this time. I am sure many of you reading this who have been in the game for any period of time have done the same thing. But as good as whey is, sometimes I just can't seem to whip up another whey shake, no matter how much I like the flavor. In fact, I like to mix it up and get a variety of different protein sources from my shakes. Providing multiple protein sources provides the body an influx of amino acids in different concentrations, allowing for maximum muscle growth.

I LOVE MY CARNIVOR

I have been using CARNIVOR for the last few years, and simply love it. CARNIVOR is the first and number one selling beef protein on the market, for one simple reason ... it works! Simply put, beef is king when looking to pack on muscle. But the fact remains that many of us, when dieting, cut back on red meat due to the high fat and cholesterol content. So how does a hardworking bodybuilder get in all the muscle-building goodness of beef without all the bad stuff it's known for? The answer is CARNIVOR!

PACK ON MUSCLE, FAST

We all know that nothing builds muscle density like beef, and now science has proven it once again. A groundbreaking study presented at the 2015 International Society of Sports Nutrition (ISSN) conference in Austin, Texas showed that hard-training athletes who supplemented with CARNIVOR Beef Protein Isolate gained an average of 7.7 pounds of pure muscle, while increasing strength. These subjects consumed CARNIVOR daily for eight weeks while training five days per week. The placebo group did not significantly improve their muscle mass from the baseline. Another mind-blowing fact is the same study showed that test subjects significantly improved their strength by over 20 percent from baseline. Test subjects increased their bench-press strength by an average of 45 pounds, while increasing their deadlift by a whopping 90 pounds. These recent findings show that CARNIVOR is much more than hype, and it has the scientific backing to prove just how powerful it really is.



HOLD ON, THERE IS MORE

MuscleMeds' latest release is none other than CARNIVOR RTD. Now, all the muscle-building, power-unleashing strength of regular CARNIVOR can be found in a convenient, ready-to-drink (RTD) product. Just when you thought it couldn't get any better, it just did. Each RTD contains a muscle-synthesizing 40 grams of the highest-quality protein with zero grams of fat. Yes, you heard that right. In fact, it also contains zero grams of sugar, zero grams of cholesterol, zero grams of lactose and absolutely no gluten for those who are sensitive. This gives you all the anabolic properties of beef, without any of the downsides.

MuscleMeds uses only USDA-inspected beef that is non-GMO, rBST-free, antibiotic-free and hormone-free. CARNIVOR Beef Protein Isolate delivers the muscle-building power of beef with greater amino acid levels than other protein sources used in supplements, including whey, soy, milk and egg. In fact, CARNIVOR Beef Protein Isolate is 350 percent more concentrated in anabolic, muscle-building aminos than a prime sirloin steak!

REAL-DEAL MUSCLE BUILDER

When it comes to getting in my daily protein shakes, a day would not be complete without my CARNIVOR. I try to get in at least two to three shakes daily, to help keep my body in a constant anabolic state. The best way to do this is to keep myself in a positive nitrogen balance using CARNIVOR. Regular CARNIVOR comes in 10 mouthwatering flavors that have to be tried to see just how good they really are. The Fruit Punch is out of this world, but I have also fell in love with the Blue Raspberry and Chocolate Pretzel as well.

If you are tired of drinking one more whey protein shake, now is the time to give CARNIVOR a try. I know you will love the muscle and strength gains just as much as I did. While other companies have tried to put a new spin on whey for the last decade, MuscleMeds brought something totally new and innovative to the table— with results that are backed by clinical studies. Get your hands on a tub or the new RTDs and take advantage of all CARNIVOR has to offer you in your quest for getting jacked!

For more information, visit musclemedsrx.com.

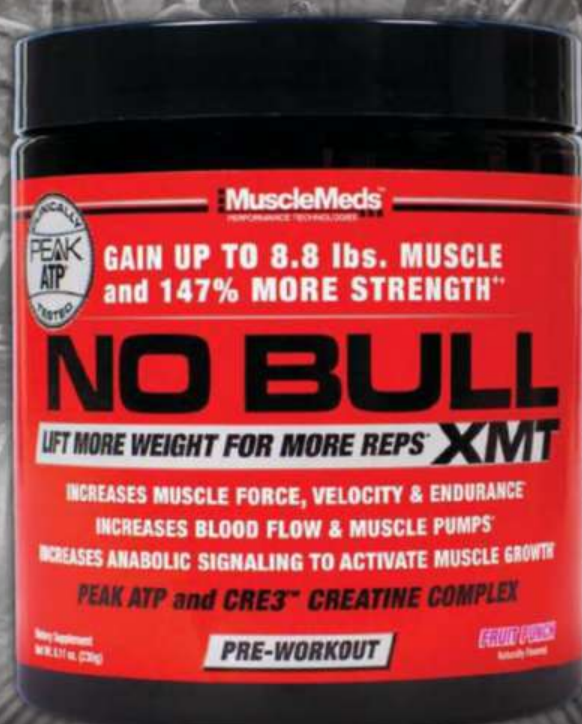
CARNIVOR RTD

- Highest quality beef protein isolate in existence
- Build muscle and increase strength— fast
- 350% more concentrated in anabolic muscle-building aminos than a prime sirloin steak
- Non-GMO and hormone free
- 20 times the creatine content of steak
- Digests easily and tastes great
- Number-one selling beef protein that leaves all others in the dust



THE ULTIMATE MUSCLE BUILDING PRE-WORKOUT FORMULA

- ➔ **INCREASES MUSCLE FORCE, VELOCITY & ENDURANCE**
- ➔ **54% GREATER BLOOD FLOW & MUSCLE PUMPS**
- ➔ **INCREASES ANABOLIC SIGNALING TO ACTIVATE MUSCLE GROWTH**
- ➔ **INCREASES TRAINING ENERGY & FOCUS**



NO BULL XMT (Xtreme Muscle Tension) has been formulated with clinically researched ingredients to enhance workout performance and muscle growth through a proven training concept called "Time Under Tension." During a resistance training workout, the amount of time your muscles work is measured in repetitions and the amount of tension is measured in weight. Increasing the number of reps (time) and the amount of weight on the bar (tension) during a set increases the workload placed on your muscles and stimulates greater muscle growth. NO BULL XMT is formulated to do just that. More Reps + More Weight = More Muscle Growth!

In the development of NO BULL XMT, MuscleMeds researchers focused on a key mechanism in muscle called "Excitation-Contraction." Enhancing this mechanism of action in muscle tissue helps increase muscle force, velocity and endurance, thereby increasing time under tension and total workout performance. In addition to enhancing muscle excitation-contraction, NO BULL XMT's advanced synergistic design also increases energy, muscle pumps and anabolic signaling, making it the ultimate performance enhancing pre-workout formula. NO BULL XMT is the pre-workout formula for those who want more... More weight for more reps equals more muscle growth!

GAIN UP TO 8.8 lbs. MUSCLE and 147% MORE STRENGTH!*



1.888.575.7067
MuscleMedsRx.com

© 2015 MuscleMeds. All rights reserved. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, cure, treat or prevent any disease. Your results may vary.
*Claim based on a clinical dose taken before training, based on double-blind placebo controlled study using 400 mg of PEAK ATP following a specific diet and exercise program. Visit MuscleMedsRx.com for study. Your results may not be typical.





**CODY
MONTGOMERY**

THE SPECIAL ONE

***Up Close and Personal With the Best Young
Bodybuilder Ever – Where He Came From,
Where He's Going and How He Nearly Quit Last Year!***

BY PETER MCGOUGH • PHOTOGRAPHY BY MICHAEL NEVEUX

Despite his tender years, Cory Montgomery, who turned 21 last August 6th, is already a record breaker. In 2013 he became the first competitor to ever win the NPC Teenage Nationals twice and if that was not enough, he won it again in 2014 to be the first three-peater in that division; a feat that will probably never be equaled. Also in 2014, the same weekend he won his third Teenage title, he won the NPC Collegiate title also, becoming the first to ever win both titles. In both classes, he took the heavyweight and overall accolades. He really is a phenomenon with a perfect seven contests; seven wins being his career record.

Last July, he entered the NPC USA Championships at 11 days short of his 21st birthday and sensationally won the heavyweight and overall champion titles— becoming the youngest-ever winner of an overall title at the Nationals level. In addition, as a result of his USA exploits, he earned an IFBB pro card.



Cody Montgomery was born in Anchorage, Alaska on August 6th, 1994, to his parents, Rebecca and Doug, who both worked as engineers for the ARCO oil company. Cody was the youngest of three siblings: he has a brother, Justin, who is two years older, and a sister Nicole, who is two years older than Justin. When he was 2, the family relocated to Dallas, Texas where they have lived ever since.

He grew up playing many sports ranging from soccer, football to competitive golf, in which he was something of a prodigy. His first contest was the 2010 NPC Dallas Europa Supershow, where he won the teen class at 15. He's like a PR agent's role-model dream, in that he combines bodybuilding with pursuing a first-class education. Currently, he attends the University of Texas at San Antonio, where he's in his third year of general business studies.

It's a personal thought that besides physical attributes, a top competitor has to have an equal abundance of mental strength and a mindset that sets him apart from his peers. At an extraordinarily young age, Cody

“AT FIRST MY PARENTS THOUGHT IT WAS REALLY WEIRD WHAT I WAS DOING. THEY WERE NOT REALLY AGAINST IT, BUT THEY PROBABLY WOULD HAVE BEEN A LOT HAPPIER IF I'D STAYED WITH GOLF.”

Montgomery has the physique and that gifted mindset. In this interview, we try to unearth the drive and psyche of the most successful-ever 20-year-old bodybuilder. In his own words, Cody takes us through the paths and detours of his career that have made him a superstar.

CHILDHOOD

My parents raised us three kids to have values, and I had a great childhood. They taught me from a young age that I had to work for pretty much everything. For instance, I had to go clear leaves from our neighbor's house before they'd let me go to the movies or hang out with friends. In Dallas, we lived in a very good

neighborhood and a lot of my friends were spoiled. But I wasn't spoiled; essentially, my parents taught me you have to earn everything in life.

I played football and started lifting weights just to get bigger in general. I was kind of a skinny kid, but I had abs and a wiry frame. I just wanted to build some muscle to attract girls. I started going to the gym with my brother when I was 12, back in 2007. We went to Life Time Fitness in Dallas. My brother had a car, so I went to the gym with him and he was pretty much my training partner for a while. I started getting bigger than my brother, who was two years older than me, and it sort of pissed him off.

FIRST CONTEST

One day in 2010 when I was 15, a guy at the gym who owned a supplement store suggested I compete. I was like, I don't even know where to begin ... I don't even know what competitive bodybuilding entails. He said he saw a lot of potential in me, and said he'd sponsor me if I entered the teen division of that year's Europa Supershow in Dallas. I didn't really know what I was doing for that first show. I remember

watching Flex Lewis videos and he was eating a lot of tilapia, with which he ate a lot of tomatoes, so that's what I began to do.

When I first stepped onstage at that contest, it was like a whole new world opened up for me. At 172 pounds, I won the teen division and as I came offstage, my mom was waiting for me. I told her, "This is what I want to do." I felt so at home onstage, and it lit a flame inside me that has never left. From that point I was very, very, motivated. I began to look at bodybuilding as my vocation, as being a 24-hour job in which I had to be really focused and driven. It also brought a structure and a sense of discipline to other areas of my life. I'd signed up for football the next year, but I didn't want to play. I dropped everything and bodybuilding became my passion.

PARENTS' REACTION

Let's be honest, bodybuilding does have a dark side to it, and at first my parents thought it was really weird what I was doing. They were not really against it, but they probably would have been a lot happier if I'd stayed with golf. They never said they didn't want me to do bodybuilding, but they saw my passion. They didn't support me 100 percent at first, but they never said don't do it. Basically, they just wanted me to do what made me happy. When I started having success they came around, and have been very supportive as parents in all facets of my life.

EYE ON THE TEENS

Having won the teen division at the 2010 Europa at age 15, I had this crazy idea of winning the NPC Teen Nationals, not just once but multiple times, because I wouldn't be ineligible for that division until 2015. I set my sights on the 2012 Teens, when I would be 17, and trained and dieted hard for two years. I didn't know if I was going to win, but reasoned even if I didn't, I still had two more shots to do it. I wanted to win at least one, I guess.

In 2011, I entered the Ronnie Coleman Classic in Dallas, and won the teen title and the middleweight novice division. For the 2012 NPC Teens, I gave it my all in my 16 weeks of prep, approaching it like a professional. For that show, there was a lot of publicity around Dominick Cardone, while no one knew who I was. I was the underdog. In the end, Dominick won the heavyweight division and I, at 184 pounds, took the light heavies and the overall.

TOWARD A TRIPLE SLAM

After winning that first Teen Nationals title, I got my first real paid sponsorship deal. I now had some backing, which felt great. Previously, I thought I'd done it without a lot of people behind me, so with a support group I had a lot more confidence. But going into 2013 Teen Nationals, I experienced the worst prep I'd ever had. I was behind schedule the entire





**NPC USA CHAMPION &
BLACKSTONE LABS ATHLETE
CODY MONTGOMERY**





BLACKSTONE
LABS

O=C1C=CC2=C1C[C@H]3[C@@H]4[C@H](C2)C[C@@H](C4)O



THE CODY I KNOW

Aaron Singerman, CEO of the fast-growing Prime Nutrition, signed Cody Montgomery to a sponsorship deal late last year. Here is what he has to say about his colleague and friend.

"What originally attracted me to sign Cody was his youth, and the fact that he was the most successful teenage bodybuilder in history. Once I got on the phone with him, and started discussing where I saw him potentially fitting in on our team, I was immediately sold. It's not just that Cody is an exceptional bodybuilder; he's also a tremendous young man. He spoke eloquently, was incredibly mature for his age, was obviously laser focused, was respectful, and all that plus he was humble.

"I kept in very close contact with Cody while he was competing at the USAs. He never acted cocky; never let his head get big, no matter how many people told him he 'had it in the bag.' When Jay Cutler came to privately watch him go through his poses in Vegas, he texted me and said, 'That was the coolest thing that ever happened to me,' and asked me, 'Is this real life?' When Cody won, he couldn't stop crying and told me how grateful he was to PJ Braun [Aaron's partner] and I for signing him, and made sure to mention that to anyone he spoke to. That's the kind of young man Cody Montgomery is.

"When I spoke to Cody for the first time, I had the idea that he could be what bodybuilding has been waiting for. He might be the next big thing. Cody Montgomery can make bodybuilding cool again. He can usher in a new age for bodybuilding, and I believe he can be Mr. Olympia."

time. I started my diet only 12 weeks out, whereas as before I always had a 16-week contest prep period. I was 198 pounds for that contest—right on the light heavy limit. When I stepped offstage, Chris Cormier—who had become my mentor—asked me, "How does it feel to win a contest at 85 percent?" I made my mind up right there that I would never come in at 85 percent again. In July 2014, weighing 208 pounds, I came in at 100 percent and took my third straight Teen Nationals title. I also won the Collegiate Championships, competing against guys a lot older than me. Winning those two titles in the same year had never been done before.

YOUNG AND DONE

From that high of July 2014, things began to spiral out of control. My sponsorship agreements came to an end at the same time I split up with

my longtime girlfriend. To be honest, I went into a depression and I do mean "depression," not just a feel sorry for myself mood. I would wake up in the morning with studies and bodybuilding on my mind. I'd start eating my breakfast, but with so much stress and anxiety in my life I just couldn't keep the food down and I'd puke. I thought I'd just focus on school at the University of San Antonio, and decided to quit bodybuilding for the time being and come back at some point in the future.

OUT OF THE DARKNESS

Things began to turn around, and I signed a sponsorship deal with Aaron Singerman and PJ Braun of Blackstone Labs, which relieved things financially. By November last year, I had got my head together and targeted the 2015 NPC Nationals the following November. I started from a relatively lean spot and

made great gains, so much so that 11 weeks out from July's USAs, I felt I would be ready for that contest instead of waiting for the Nationals in November. By now, I was working with contest-prep expert Chris Aceto. He made me eat more and upped my protein intake, which speeded up my metabolism. The plan was to make me as full as possible, while still having contest condition. Chris said, "You need to stay full, otherwise you're going to look like a child amongst men when you step out in the USA heavyweight class." In the past, the goal had always been "get harder, get harder." Now it was "get hard and full." I think that enabled me to come in with a different look than before.

ROLLING THE DICE IN VEGAS

The prejudging for the USAs was Friday, July 24. On the Thursday, night I began feeling sick. I think I had food poisoning and around 2:00 a.m. Friday morning—12 hours before prejudging—I started puking and it wouldn't stop. I tried to get out of bed at 4:00 a.m. and almost collapsed, and I couldn't even summon the energy to hit a pose. I'm quite a religious guy, and I prayed for things to normalize. I woke up at 6:30 a.m. and I was fine. It was almost miraculous.

I love the rush of being onstage. I get

"IT WAS LIKE A WHOLE NEW WORLD OPENED UP FOR ME. AT 172 POUNDS, I WON THE TEEN DIVISION AND AS I CAME OFFSTAGE, MY MOM WAS WAITING FOR ME. I TOLD HER, 'THIS IS WHAT I WANT TO DO.' I FELT SO AT HOME ONSTAGE, AND IT LIT A FLAME INSIDE ME THAT HAS NEVER LEFT."

really pumped-up physically and mentally backstage, because I know I gave it my all, the work is done and it's time to show the world what you been working on. For the USAs, I put my heart and soul into the prep, and came in at around 220 pounds. I was just excited to get onstage and show the improvements I had made, and then just see how everything played out. Ultimately, it's up to God and the judges.

When I got backstage and looked at the lineup getting ready, I thought, "Shit! These guys are huge." Against them, I felt pretty small and was thinking some of these guys have been training longer than I've been alive. Then came the first callout. I was the last one called, but then they moved me to the middle so I knew what that meant. They never positioned me anywhere else, so at that point I was confident I was in the driving seat and would take the heavyweight division. Looking ahead to the overall posedown, I didn't know who the super heavyweight winner was going to be, but I knew they couldn't outcondition me. In fact, being sick helped in that it made me a lot drier for the prejudging.

THE MOMENT OF TRUTH

When my name was called out as the 2015 USA overall winner, I looked into the audience and saw my family all seated together, clapping with a big grin on the faces. I looked at Chris Cormier smiling and Chris Aceto nodding his head. I felt the victory was not only mine—it was also for them. My drive all through prep was that I didn't want to let any of them down. [Ed's note: At this point in the interview, Cody became a little bit emotional.] As you can tell, I'm an emotional guy. I cried at that point, but I also wept after the prejudging. I kept asking myself, "Why me?" The icing on the cake was that everyone was saying this was the best USA in years, so it wasn't like I won in an off year. I thought back to fall 2014, when I was at my lowest, depressed and thinking of quitting bodybuilding. That was the lowest of the low, and now I was experiencing the highest of the high. I felt a connection with God. He showed me from way back that there was a path for me to follow.

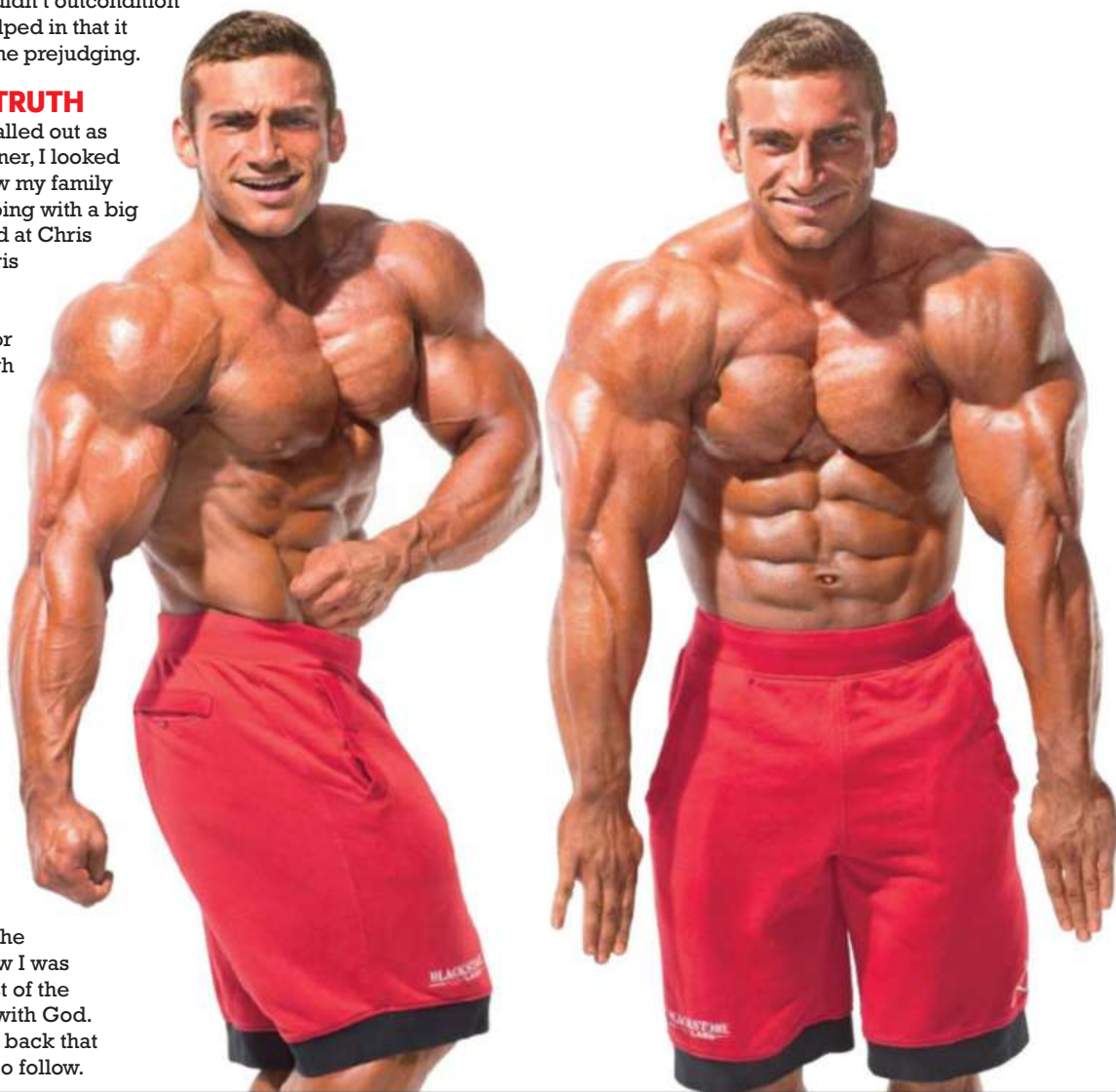
THE FUTURE

I'd love to do the 2016 Arnold Classic in Columbus. Some people may think I'm aiming too high; after all, it's the second-most prestigious show on the calendar. But I'm really competitive, and want to test myself against the best-caliber bodybuilders there are. I think I can be competitive as I don't really have a ton of weaknesses and, even though I say it myself, I think my physique is pretty complete. As a 21-year-old, I often have people telling me, "You're so young." That doesn't gel with me, as I think I'm pretty realistic about what I can achieve. I think for the Arnold, I could put on another five pounds of quality muscle without disturbing my lines. I will never play the size game. I feel right now that everything's going for me, and I'm in a good spot to have a really great off-season to make gains.

I'm staying focused with my food and training. I won't rush anything, as I think I can make gains annually for the next few years. With my 5'9" frame I can see me maxing-out around maybe in the low 240s. I just take my progress one show at a time. I think that's one of the reasons I've been successful, because I'm just able to focus on the immediate goal and nothing else. The future is unknown, and really all you can do is trust in God's plan. Long-term, whatever contest success I have, I want to be a really good ambassador for the sport.

THE OLYMPIA

If I did qualify for the Olympia next year, I would compete there—I don't believe in skipping a year. There is no real reason not to do it, because the chance may never come again. I would look at my first Olympia as an





experience to absorb the whole event and go through the entire weekend, the press conference, Meet the Olympians, the hoopla and the fan reaction. It would almost be a dry run to learn the ropes of the event, while obviously doing your best onstage. But then, hopefully doing a second Olympia I'd have a "been there, done that" attitude and just concentrate on competing.

AN OLD HEAD ON YOUNG DELTS

As stated earlier, I keep getting comments along the lines of nobody's ever done this at 20 years of age. I think a lot of it has to do with having to grow up fast. When I was 8, my mom became seriously ill with cancer. My sister was basically my mom for a few years, so it made me really grow up and be aware that life was not a bed of roses. To be honest, I don't feel like I'm 21— I don't look like a 21-year-old. I've never been to a college party, so I'm not your typical 21-year-old. Bodybuilding is everything to me.

In closing, I want to help people in their bodybuilding endeavors and factors outside the sport. That's why I don't have a problem talking about depression, which is a very real and dark experience. By talking about it, hopefully perhaps others going through a similar passage can see that you can come through the darkness toward the light. You have to believe and know that tomorrow is going to be a better day, and the next day will be even better. You have to keep your faith in God, trust his plan and don't be afraid that you can't overcome those mental hurdles. With faith and belief, you will prevail. ■





ROB WASLOWSKI
EPIQ™ ATHLETE
@robwaslowski

NEW!

TRUSTED PERFORMANCE JUST GOT BETTER

THE EPIQ EVOLUTION HAS BEGUN

New **EPIQ™ STRYKE** is our strongest formula to date. It's formulated with powerful active ingredients to deliver electrifying energy, enhanced focus, and more strength and power.

- The most intense pre-training formula – period
- Ingredients backed by 3 clinical trials – most competitors have none
- The only pre-workout with free-acid L-arginine, rhodiola & ashwagandha
- Clinical dose of beta-alanine – most competitors are underdosed
- Clinical dose of taurine shown to increase performance in endurance athletes
- Based on research from the University of Stirling & the University of Oklahoma

Superior to the Competition

	Arginine	Ashwagandha	Taurine	Caffeine	Rhodiola	Creatine	Beta-Alanine
EPIQ™ STRYKE	Free-Acid L-Arginine	YES	YES	175mg	YES	NONE	YES
Leading Competitor	Standard AKG	NONE	NONE	150mg	NONE	1g	YES
Benefits	Powerful Pumps*	Decreased Cortisol*	Enhanced Endurance*	More Energy*	Adaptogenic Herb	Zero Bloating	Enhanced Muscle & Strength*



EPIQ™ is:



FREE OF
BANNED
SUBSTANCES



FREE OF
ARTIFICIAL
COLORS & DYES



FREE OF
HARMFUL
IMPURITIES



FREE OF
UNDECLARED
INGREDIENTS



MANUFACTURED ACCORDING
TO cGMP STANDARDS,
AS IS REQUIRED FOR ALL
DIETARY SUPPLEMENTS

AVAILABLE EXCLUSIVELY AT

GNC
LIVE WELL



EPIQRESULTS.COM

Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

HOW TO BUILD A

Classic



WHAT IS A CLASSIC PHYSIQUE?

The "classic physique" is essentially the physical and aesthetic ideals that bodybuilding was founded on, and which its participants strove for and adhered to for many decades. Based closely on the same ideals as the sculptures of ancient Greece, it was an ode to physical perfection. Everything was balanced and in proportion, from the bone structure to the individual muscle groups. In fact, for some time, bodybuilders actually endeavored to duplicate the same mathematical proportions of those ancient Greek

statues: the upper arms, neck and calves were supposed to measure exactly the same. As the years went by, our sport witnessed many champions whose physiques were true works of masterpiece art made flesh, men like Steve Reeves, Serge Nubret, Frank Zane, Bob Paris, Robby Robinson, Lee Labrada, Rory Leidelmeyer and Francis Benfatto, to name a few. Up to and including the Mr. Olympia reign of Lee Haney, bodybuilders never put their emphasis on simply building raw mass. Shape, proportion and aesthetics were always foremost in their minds. "A great physique is powerful

Physique

BY RON HARRIS



but also beautiful at the same time," Haney said. The ideal physique featured broad shoulders and a wide upper back, yet still with a small waist and hips. Haney himself had a 31-inch waist in contest shape at 250 pounds. Standards shifted in the 1990s with the dawn of mass monsters like Dorian, Nasser, Fux and others who exemplified extreme size. Waistlines were expanding, and classic ideals began to take a backseat to getting as big and freaky as possible. That's not to say that we still don't have physiques in the IFBB today with that classic look. Dennis Wolf, Cedric

McMillan, Dexter Jackson and Shawn Rhoden are all examples of men with plenty of muscle mass, yet with superb shape and dramatic V-tapers.

DO YOU WANT A CLASSIC PHYSIQUE?

Some guys start training simply to get as huge as possible. They often have a goal of hitting a certain weight like 225, 250 or even 300 pounds, or attaining certain arm and thigh measurements, even if it means they put five to 10 inches on their waist over time. And there's nothing wrong with that, if



that's what you really want. For many others, the goal is a little more specific: They don't just want to look bigger, they want to look *better*. They look to those aforementioned classic physiques as their ideal, and fix those images in their heads every time they head to the gym to not merely build a physique, but to craft a work of art. Granted, things like bone structure, muscle shape and tendon attachments definitely play a major role in how you will ultimately look. But at the same time, you also have a lot more control over the finished product than you may think. You are the sculptor, and your body is the clay. By consciously choosing what to emphasize and what to minimize in your training and overall bodybuilding regimen, you can build

a physique that won't just have people remarking, "He's a big guy." Instead, they will be impressed enough to recognize they are looking at something special, something that took not only time and hard work to achieve, but planning and thought. In other words, your physique will be a thing of beauty. Does that sound better than being just another bulky dude? If so, then read on!

AREAS TO EMPHASIZE

The general shape you want is the "X-frame," which means wide up top and tapering down to a small waist and hips, with quads and hams flaring out. A classic physique will also feature calves that are proportionate to the thighs. The top of the torso should be wide and full. Shoulder width should be optimized via emphasis on round, full side delts. The chest should be high and full, so work hard on incline presses. The upper back should be wide and flaring, so do plenty of chin-ups and wide-grip lat pulldowns. The biceps, triceps and forearms should all be developed and in balance with each other. As for the lower body, outer quad sweep along with fullness in the vastus medialis or teardrop is desirable. Front squats and hack squats do a better job of targeting those areas than standard squats or heavy leg presses. If you do leg presses, use a closer foot stance to emphasize the vastus lateralis for better outer sweep. And though yes, calves are largely influenced by your genetics, you should do your best to maximize them. If that means training them three times a week, do it! Many people give up on their calves out of frustration, and never realize their full potential.

THE GENERAL SHAPE YOU WANT IS THE "X-FRAME," WHICH MEANS WIDE UP TOP AND TAPERING DOWN TO A SMALL WAIST AND HIPs, WITH QUADS AND HAMS FLARING OUT.



AREAS TO AVOID OVERDEVELOPING

The entire middle of the body must remain as small as possible in a classic physique. You don't want a thick waist, a big gut (regardless of how low your body fat is) or bowling-ball glutes. Some exercises like heavy deadlifts and squats cause some people's cores to expand to massive proportions. If you notice that your midsection is growing and you are doing those, stop doing them! The abdominals should likewise not be trained heavy. Bodyweight crunches and leg raises should take precedent over using the stack on ab machines and cable crunches. Absolutely avoid side bends or those rotating seated machines that work the obliques. You do not want a wider waistline.

Some men also have a tendency to build enormous glutes. The glutes are the most powerful muscle in the human body, and it's easy to rely on them to move prodigious weights in the leg press and squat. If your glutes are routinely sore after leg day, you must adjust your leg training before it's too late and they grow out of control. Massive, powerful glutes are great for sports like football and powerlifting, where they will contribute to your performance on the field or on the lifting platform. If building a classic physique is your aim, you must not allow your glutes to get too big.

When talking about the upper body, there are two key areas to keep an eye on. First are the traps. Not all of us are blessed with wide clavicle bones. In such cases, creating the illusion of wide shoulders presents an extra challenge. Diligent work on the side deltoids



A CLASSIC PHYSIQUE IS WELL WORTH THE EXTRA EFFORT, BECAUSE IT WILL STAND APART FROM THE MASSES OF LIFTERS WHO CHASE NOTHING BUT RAW BULK.



"A GREAT PHYSIQUE IS POWERFUL BUT ALSO BEAUTIFUL AT THE SAME TIME." — EIGHT-TIME MR. OLYMPIA LEE HANEY



LEE HANEY ON THE CLASSIC PHYSIQUE

Lee Haney, who retired in 1991 with eight Mr. Olympia titles, was the last Mr. O with what many would consider a classic physique. A few months ago in his column, he had some wise observations on the subject.

"There was a time in bodybuilding not so long ago when the emphasis was on taper, shape, balance, symmetry and presentation, just as much as it was on size. Those were the ideals of bodybuilding, and that's what it still should be today. When I was coming up and eagerly studying the magazines for information and inspiration, they were filled with images of men like Arnold, Steve Reeves, Larry Scott, Bill Pearl,

Sergio Oliva, Robby Robinson and Frank Zane. Those were the physiques our sport's foundation was founded on, and that's what I tried to create with my own physique."



"Let me be very clear about one thing here. I am not putting down mass. As bodybuilders, of course we want to maximize the size of our muscles! But it should never be at the cost of losing the beauty and the lines of the physique. I was 257 pounds at the 1989 Mr. Olympia in Rimini, Italy.

At that size, I had a tapered waist and pleasing lines. At my eighth and final win in 1991, I was 254 pounds with a 32-inch waist. I never wanted to sacrifice my small midsection just to be bigger and heavier, which I could have done. I came up in a time when every bodybuilder could hit a vacuum. It was the holy grail for us, to be big yet still maintain that dramatic taper. Today's bodybuilders don't aspire to that because they haven't been exposed to it."



is needed. At the same time, anyone with average or below-average clavicle width must by all means avoid overdevelopment of the traps. Thick, bulging traps will make the shoulders appear narrower. A good example is the late WWE star Chris Benoit. Benoit had some seriously jacked traps, but his clavicles were fairly narrow. Due to his monster traps, his shoulders seemed to be only about a foot apart. In contrast, a more recent WWE star, Dave Batista, has similar trapezius development, yet also happens to have extremely wide clavicles. Therefore, his traps don't take away from his shoulder width.

THE NEED TO PAY ATTENTION TO DEVELOPMENT

Bodybuilders should really always be mindful to keep the various body parts in proportion, but even more so if you desire a classic physique. You don't want to allow yourself to become top-heavy, and being bottom-heavy, with legs that are far more developed than your upper body, is even worse. We all have our own areas that develop faster and easier than others, and other body parts that are stubborn. The temptation is to avoid working harder on those areas that respond easier, because they do provide quicker gratification. If you are unable to objectively look at your own physique and assess the overall balance of your body parts, have someone with an experienced eye do it for you, either live or via photos. This can help you catch imbalances before they go too far. I've been asked to evaluate physiques, and many of the subjects were genuinely surprised to hear they needed more upper pecs, hams, quad sweep, etc. Often, we see ourselves so often that we don't see ourselves as others do. This is very often the case with our midsections. They can grow at such a slow yet steady rate, that you might go from a size



BASED CLOSELY ON THE SAME IDEALS AS THE SCULPTURES OF ANCIENT GREECE, IT WAS AN ODE TO PHYSICAL PERFECTION. EVERYTHING WAS BALANCED AND IN PROPORTION, FROM THE BONE STRUCTURE TO THE INDIVIDUAL MUSCLE GROUPS.





ANYONE WHO WANTS A PHYSIQUE THAT EMBODIES BOTH POWER AND AESTHETIC BEAUTY SHOULD STAY THE HELL AWAY FROM GH AND INSULIN.

32 waist to a 40 before you even realize you have a gut! Yet a third party with a critical eye may have caught it long before it got to that point.

CONSIDERATIONS REGARDING FOOD AND DRUGS

On the subject of big guts, this is probably the one area you must do everything in your power to avoid building. There are various theories and opinions about what leads to big bellies, but most in the know seem to have arrived at several common culprits. First up is overeating. Stuffing yourself to the point of nausea at each and every meal is a common practice for those who are attempting to “bulk up.” I did it myself for many years, with dire consequences to my once smaller midsection. The stomach and intestines are in fact lined with muscle. Over time, when those muscles are constantly stretched out, you can bet your ass they grow. Add in steroid use, and they will grow even larger. Keep portions moderate. Then there’s the other “double drug whammy” of human growth

hormone and insulin. That duo joined steroids as “must-use” drugs back in the ‘90s, when standards for size were shifting toward freakish levels. When combined with steroids, GH and insulin will certainly help you build a whole lot more size than simply steroids alone. Unfortunately, your gut will grow along with everything else. As I said in the intro, some guys are fine with that. They just want to be huge, and a gut that sticks out as far or farther than their chest is something they can live with, as long as they are rocking 21-inch guns and traps up to their ears. But anyone who wants a physique that embodies both power and aesthetic beauty should stay the hell away from GH and insulin.

EXERCISE DO'S FOR A CLASSIC PHYSIQUE

- LATERAL RAISES
- CHIN-UPS
- LAT PULLDOWNS
- INCLINE PRESSES
- FRONT SQUATS/HACK SQUATS
- CALF RAISES

EXERCISE DONT'S FOR A CLASSIC PHYSIQUE

- DEADLIFTS
- SQUATS
- FLAT BENCH PRESS
- WEIGHTED ABDOMINAL WORK
- OBLIQUE WORK



YOU CAN BUILD A CLASSIC PHYSIQUE!

A classic physique can be yours, but it won’t happen by accident. You need to have a plan, follow through on it, and constantly be vigilant as to how your body is developing so adjustments may be made as needed. In the end, a classic physique is well worth the extra effort, because it will stand apart from the masses of lifters who chase nothing but raw bulk. It will be shapely, symmetrical, yet still masculine and impressive. Those who appreciate any masterful piece of art will recognize your physique as a living testament to aesthetics. And in even plainer terms, you will be hearing a lot more people saying “Wow!” and far fewer people saying “Eww” or other similar snide remarks. But of course, you should build your physique to satisfy yourself—and a finely crafted, classic physique staring back at you in the mirror is about as immensely satisfying as it gets. ■

Science-Backed and Barbell-Tested

WHAT'S YOUR

GRIT NESS?

STEVE WEATHERFORD

Fittest Man in Football • True Grit Athlete

What is True Grit? It's not going the extra mile; it's going the extra ten. It's when "good enough" is never enough. True Grit isn't blind work. It's precise action performed with maximum effort. It's reading, interpreting and applying research. It's the combination of knowledge and power. True Grit is old-school training cut with new-school science. It's training harder and smarter. It's not giving up; it's getting up. True Grit is for the true warriors who want the best. True Grit is blood, sweat and study. True Grit is **science-backed and barbell-tested**.

Join the movement and prove your level of "gritiness" at facebook.com/truegritness



Start the **TRUE MUSCLE** Training Series Today!
Available for **FREE** on Bodybuilding.com

bodybuilding.com/fun/true-muscle-9-weeks-to-elite-fitness.html



FULLY DISCLOSED
FORMULAS



PATENTED
INGREDIENTS



KEY INGREDIENTS BACKED
BY CLINICAL RESEARCH



UNBEATABLE
TASTE



SCIENTIFICALLY DOSED
CORE DRIVERS



MAX POTENCY FOR
MAX RESULTS



NO PROPRIETARY
BLENDS

#WhatsYourGritness

truegritness.com

Join the conversation

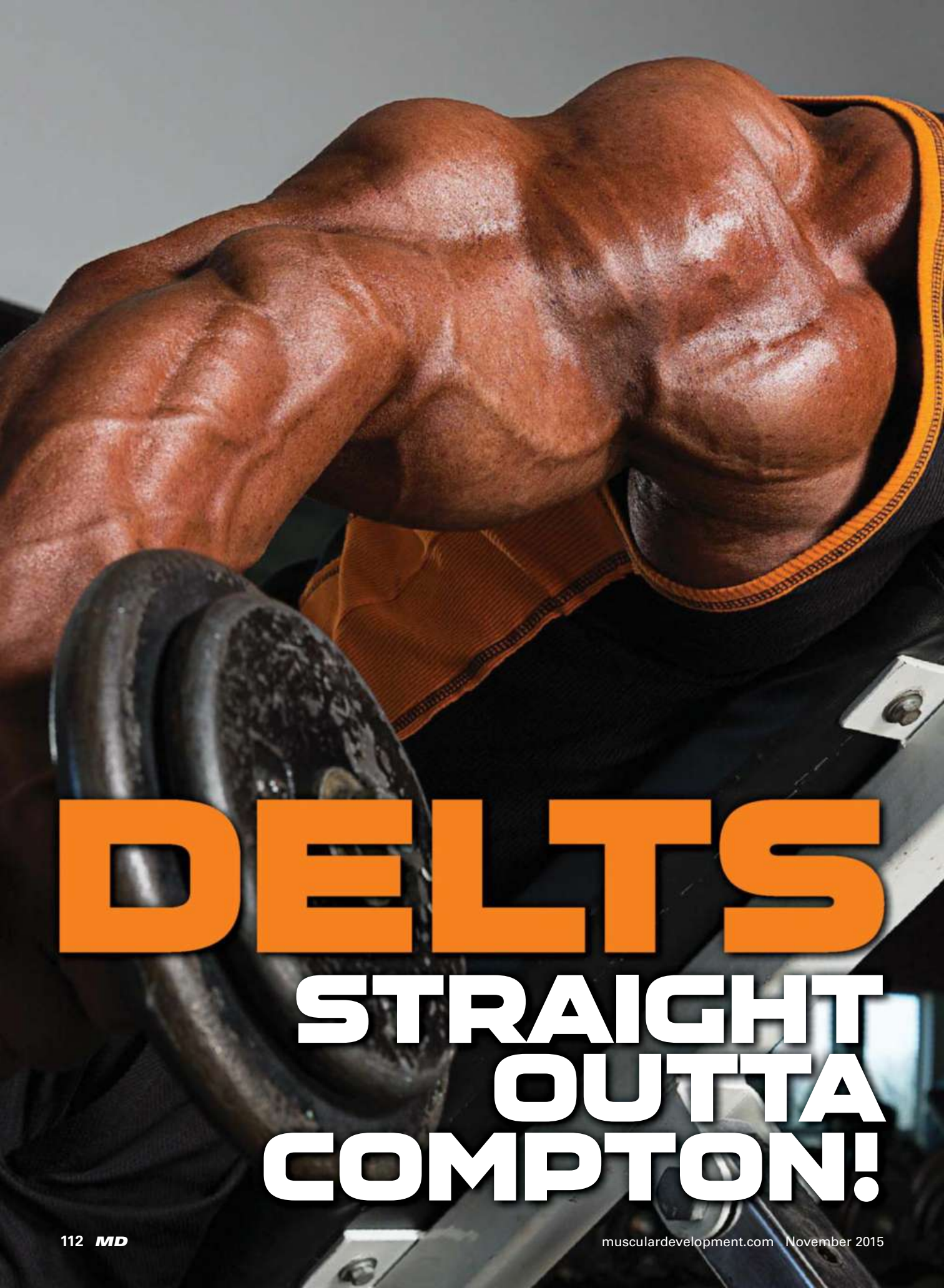


Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

Available Exclusively At



[BODYBUILDING.COM](https://Bodybuilding.com)



DELTS

**STRAIGHT
OUTTA
COMPTON!**



How Justin Compton Trains the Shoulders That Will Rule the Sport

BY RON HARRIS
PHOTOGRAPHY BY IAN SPANIER

THIS KID IS THE FUTURE OF OUR SPORT!

Kevin Levrone said it last month in "How I See It," and I am going to officially agree with his prediction here: Justin Compton will be the man who breaks Phil Heath's winning streak and will prevent him from tying the joint record of eight Mr. Olympia wins held presently by Lee Haney and Ronnie Coleman. It's not that Justin is a better bodybuilder than Phil Heath. He isn't. But he will be. Phil is maxed-out for his frame and will only be able to improve marginally from here on in. To his credit, Heath made incredible improvements to his physique since winning the USA Championships a decade ago at 215 pounds. He's added a full 35 pounds of quality mass. But he's done. Meanwhile, Justin is eight years younger and still showing no signs of being anywhere near done growing. As a teenager in 2008, he was competing as a 198-pound light heavyweight. Just three years later, he was a 225-pound national-level heavyweight. The gains just kept coming, 234 for his pro debut in 2013, 244 for his first pro win in 2014 and around 254 for his first Arnold Classic earlier this year, all at 5'8". He reminds me, and more than a few others who were around to witness the rise of Jay Cutler, of that four-time Mr. Olympia champion—except that Justin actually has a smaller midsection and hips, and better overall shape. As he methodically improves on his areas that need it, Justin becomes an ever-growing threat to the entire A-list of the IFBB, including Heath.



SHOULDERS DO MAKE THE MAN

It's somewhat facetious to say that any one body part is the most important in bodybuilding, since it is a competition to determine the best overall physique. But a very strong case can be made for shoulders. When a lineup walks out, the very first impression you get is on the general size and shape of the men. Those with big, wide shoulders and small waists automatically catch the eye. If you've been to enough contests, you can often get a pretty decent idea of who the top couple of men will be before the first pose has even been called, while they stand lined up in the so-called "front relaxed" stance. One of the strong points on Justin's physique, one of his biggest advantages over his fellow competitors, is his powerful shoulder development. Firstly, his delts are built on top of wide clavicles, a factor of his genetic bone structure that makes his shoulders appear even more impressive than they would on a narrower frame such as Heath's. Second, he has already built his deltoids up to a level of thickness and mass that puts them in the elite category of development seen only in a few other men in the upper echelons of the IFBB, namely Heath, Wolf, Big Ramy, Roelly Winklaar, Evan Centopani and Juan Morel. Shoulders like Justin's are a distinct advantage for anyone aiming to be recognized as the best bodybuilder in the world—which I do believe he will be one day in the not so distant future.

*Justin with Arnold Bikini
Champion Janet Layug*

DUMBBELL REAR LATERAL RAISES

If you had to pinpoint the one area of priority that's shifted the most in Justin's shoulder training over the years, it would have to be the focus given to his rear delts. To his credit, he was at least training them from day one, which is more than many bodybuilders can say. But still, his awareness of that aspect of the deltoids definitely grew over time. "When I was young, I focused on overall mass, which was why I emphasized shoulder presses," he states. "However, this totally neglects the rear delt. As I started competing nationally, I knew I needed my work on that area, so I increased my volume and typically started my shoulder workouts with bent laterals." To maintain stricter form and ensure isolation of the posterior delts, Compton prefers to do them facedown on an incline bench. You will also note that he has adjusted his grip to have his thumbs face each other at the start of each rep. "If you look in the mirror at how your delt moves with your thumbs facing each other versus the palms facing, you will see that with palms facing it engages the side delt a lot more," he explains. "Not that this is a bad thing, but my primary focus is on the rear delts here, so I want to isolate them by making sure my thumbs face each other." For those of you who have never tried this simple variation, you will be shocked at how much more strongly you suddenly feel the rear delts working.



Shoulders like Justin's are a distinct advantage for anyone aiming to be recognized as the best bodybuilder in the world.



DUMBBELL LATERAL RAISES

"This is just the old-school, bread-and-butter movement for building good delts," says Justin. "The key is to not use too much weight, and don't involve the traps and bend too far at the arms." Since it's a conservative estimate to say that 90 percent of people doing lateral raises in any given gym merely sling the weight around and don't truly engage the medial deltoids, I asked Justin to elaborate. "The reps must be done nice and controlled," he says. "If you really do them that way, you won't require a lot of weight. I personally use anywhere from 40s to 50s, and I weigh about 280 or more most of the time. So when I see guys who weigh 100 pounds less than me doing them with 70s or 80s, I just shake my head. They're getting nothing out of that." He's quick to point out that he wasn't always a lateral raise role model. "I was guilty of this in my younger years as well, going too heavy and just throwing the weight up. But luckily, I found I could actually work my side delts harder and get better results by going lighter and focusing on better form, and feeling the side head contract on each rep."



PRELIMINARY CONSTRUCTION

Looking at someone with such superhuman development as Justin, it's easy to forget that he didn't always look this way. Certainly he had the right genetics to respond to training with far superior results than most of us mere mortals, but there was still a starting point even for him. I asked him about what his early shoulder training was like. Like most, his was nothing overly complicated. "Early in my bodybuilding journey, I never really focused on advanced angles and techniques," he told me. "I stuck to the very basics in a specific order each workout. I would do barbell military presses, followed by dumbbell side laterals and then bent-over rear laterals. That was the gist of my shoulder workout."

Most of the time, hard work on the basics is the very best way to lay a muscular foundation. It certainly was in the case of Justin and his delts. "They grew proportionally with my body at that time." Compton does concede that his genetic proclivity for big shoulders was apparent fairly soon. "My shoulders are very dominant, so they grew well under these circumstances, but for the average person I wouldn't consider this optimal," he notes. "Even for beginners and intermediates, it makes sense to switch up the exercises you do and the order you do them from time to time, such as doing dumbbell instead of barbell presses, or working rear delts first at times."

BARBELL UPRIGHT ROWS

Upright rows are a great exercise that many younger bodybuilders either aren't even aware of, or simply don't bother to do. Justin feels that's a shame. "Along with presses, upright rows are a good compound movement that works the entire shoulder girdle," he says. "I think most people give up on them too easily because they only feel them in the traps. That's usually a result of using too narrow a grip. Set your hands at shoulder width and think about pulling up and back in an arc, rather than just up in a straight line, and you get a great overall shoulder pump."

"Set your hands at shoulder width and think about pulling up and back in an arc, rather than just up in a straight line, and you get a great overall shoulder pump."

HIGH ROPE PULLS TO FACE

Justin typically starts his shoulder workout with two different movements for rear delts, one with dumbbells, then either a machine or a cable. The rope pull with a cable pulley is a frequent choice. "I started these about two years ago in order to get away from the traditional lateral raises for the rear delts," he tells us. "I added these in to change things up, and now I really like the exercise." It does take a little time to get the form down properly. "You want to make sure you are keeping the tension on the rear delts, otherwise you end up working more traps and other upper back muscles like the rhomboids."





REVISIONS AND RECOMMENDATIONS

Justin's shoulder training has undergone major changes since those early days. For the first few years, his only goal was to pack on sheer mass. Now, his approach is more methodical. "At this point in my career, I try to focus on details such as making the rear and side delts as good as possible," he explains. "I typically do much more volume for those two areas, rather than the front delt head." And his exercise order now reflects this prioritization principle. "I also start my workouts with rear and side delts, because my front delts are my stronger point. I save them for last since they don't need as much improvement."

Working strong points later in the workout seems like an obviously smarter approach, yet many bodybuilders do the opposite out of ignorance, or for the simple fact that it's usually quite rewarding to work areas that respond easily. When your goal is to chase perfection with equal development of all three deltoid heads, as it is Justin's, you have to stifle that urge. "I train the rear and side delts very hard," he points out. "I don't do as much direct work for the front delts. Usually three to four working sets is all I do, because they do get work when doing any type of press for the chest, especially incline movements." Even though the rest of us aren't going to be chasing after Arnold Classic and Mr. Olympia titles, Justin believes it's a sound principle to adhere to for all. "You hardly ever see weak front delts, but you do see a lot of side delts that could be bigger and rounder, and weak rear delts are unfortunately more common than not."

A final piece of advice applies to the

tools you choose. The standard dogma preached in our sport is that free weights are the best choice for making gains, and everything else is inferior. Compton disagrees. "I like to incorporate barbells, the Smith machine, dumbbells, Hammer Strength machines and cables into my shoulder workouts. They all have their advantages and disadvantages, and you would be missing out if you didn't make use of all of them at various times." With that in mind, here are some shoulder exercises Justin has his own unique take on.

DUMBBELL FRONT RAISES

MD keeps it real, so Justin was sure to say he doesn't do these too often. Yet they do serve a purpose in his training at times. "When I have to lower my training volume and frequency due to feeling 'beat-up' in the gym, I will replace presses with these for a few weeks in order to ease the stress on my joints and let them heal up a bit." It's doubtful they will ever play more of a role in his shoulder training. "They're not a great mass builder or a favorite exercise of mine, but front raises are a great alternative if you're having any tendinitis or other aches you need to let heal up." And if none of that sounds even vaguely familiar, count your lucky stars.



"I don't compete just to say I did the show. I want to stand with the best before doing so."



OVERHEAD PRESSES (NOT SHOWN)

What about shoulder presses? Justin still does them, of course. The difference is that he does them last in his shoulder workout instead of first, as he used to do. This is both to give priority to the rear and side heads, as previously mentioned, and so that he doesn't need to go quite as heavy with the movement as he would if he did them as a first exercise. There does come a point for some men when they become so strong on certain compound movements that it simply isn't safe for them to go as heavy as they can anymore. Compton mentioned that he likes to take advantage of all the tools in the toolbox to craft his delts, and that applies to his presses too. "I alternate my presses, typically every week, between the Smith machine, barbell and Hammer Strength," he says. "I'm not much of a fan of dumbbells, because it requires so much effort to get them from the knees to the shoulders with the amount of weight I am able to use, that I lose several reps before the set even begins." That may sound odd to some of you, but those of you who are able to press anything past 120s or 130s know exactly what Justin is talking about.

FOR THE SECOND YEAR IN A ROW, NO MR. O

Justin qualified for the 2014 Mr. Olympia by virtue of his win at the Orlando Europa, yet chose to sit out the big show. Once again in 2015 he qualified, this time on points by virtue of back-to-back third-place finishes at the Arnold Classic and the Arnold Classic Australia, both times behind seasoned veterans Dexter Jackson and Branch Warren. Once again, Justin is taking a pass on the Mr. O, as he still doesn't feel the time is right for him to stand on that most elite of stages. "When I compete in any show, I plan to be competitive. I want to be compared with the best," he begins. "I have chosen my shows as strategically as possible, and I think I have done a good job to this point. When I feel my body is ready to stand in the top three to top five at the Olympia, then I will enter the show. I don't compete just to say I did the show. I want to stand with the best before doing so. I plan to refine my physique and bring up a few weak areas, and also improve my posing and presentation for my next outing."

As for his shoulders, Justin's goal at this point is to keep them in proportion with everything else as his physique continues to grow and mature. At 26 years old, this kid doesn't just have incredible shoulders—he's got a good head on his shoulders. And it's his rare combination of gifted genetics, an analytical approach to his training and nutrition, a solid work ethic and dedication, and the patience and perseverance to plot a long and successful career in the sport that has me convinced Justin Compton is one day going to literally stand head-and-shoulders above the rest—atop Mount Olympus with a Sandow trophy in his grasp.

JUSTIN'S SHOULDER ROUTINE

Reverse Pec Deck	3 sets x 15-20 reps
Bent-over Rear Laterals	3 sets x 15-20 reps
Dumbbell Lateral Raises	3 drop sets: 15 reps down to 3-5 reps
Hammer Strength Shoulder Press	3 sets x 10-12 reps

CONTEST HISTORY

2007 Monster Mash Natural	Second, Juniors
2008 NPC Natural Ohio	Teen Winner; Third, Juniors; Fourth, Men's Open Light Heavyweight
2008 NPC Cincinnati	Third, Open Light Heavyweight
2010 NPC Kentucky Muscle	Novice and Open Overall
2011 NPC Junior Nationals	Second, Heavyweight
2011 NPC Nationals	13 th , Heavyweight
2012 NPC Nationals	Heavyweight Winner
2013 IFBB Chicago Pro	Fifth Place
2014 IFBB Europa Orlando	Winner
2015 IFBB Arnold Classic	Third Place
2015 IFBB Arnold Classic Australia	Third Place

2 NEW JACK3D FLAVORS!

THE ULTIMATE PRE-WORKOUT

ENHANCED WITH BioCRE™ (Creatine Anhydrous)



www.USPLabsDirect.com



Copyright USP Labs, LLC. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease. Information in this ad should not be used as an indication or prediction of your individual results. These products are meant to be used in conjunction with a proper nutrition & exercise program. Your results are completely dependent upon the amount of effort you put into it, which includes eating & exercising properly. You should consult your healthcare practitioner before beginning any such plan. All examples are for illustration purposes only. USP Labs is not affiliated with, and its products are not endorsed by, the United States Pharmacopeia, Rockville, MD. Customers begin their relationship with USP Labs as product.com before endorsing the company. USP Labs' Endorsers may have been remunerated for their endorsement.

DRAGONBERRY
Naturally & Artificially Flavored

PINEAPPLE
Naturally & Artificially Flavored

Anthony Thomas // TEAM USPLABS ATHLETE™

*USP Labs' Endorsers may have been remunerated for their endorsement.

GNC
LIVE WELL

theVitamin Shopper
eat right. live right.

LUCKY VITAMIN

TRU

FLYING STAR

BY RON HARRIS
PHOTOGRAPHY
BY JASON BREEZE

Best LEGS

IN THE 212 DIVISION?



GUY CISTERNINO JUST MIGHT HAVE THEM!

The 212 division doesn't get as much love as the open, in terms of prize money and publicity. Yet they do seem to have the upper hand in some areas over their taller, heavier peers. For one thing, their condition level is consistently better. Having to make a weight class probably has something to do with that, as the open men often tend to show up blurry in a misguided effort to be as big and full as possible. Another area they often eclipse their open brethren in is leg development. There is no shortage of stellar wheels among the 212 men. Reigning champ Flex Lewis has been known for his standout lower body since his amateur days, and number one contender Jose Raymond is also a freak in the leg department. Others like Hide Yamagishi, Charles Dixon and Baitollah Abbaspour (get well soon, brother!) all display tremendously thick quads and hams. But if there's one 212 pro most known for his insane wheels, it's New Jersey's Gaetano aka Guy Cisternino. He has the rare look of quads that hang over the kneecaps that made the quads of men





LEG EXTENSIONS

"I do these pretty standard," Guy tells us. "I don't go all the way down, which takes pressure off the patellar tendon. When I contract at the top, I turn my toes out to focus more on the teardrop." He usually likes to do three warm-up sets and three work sets for this and most other exercises. The final set is typically a drop set or even a triple drop set, to force as much blood into the muscle as possible.

"I HAD SCORED TOUCHDOWNS, SACKED QUARTERBACKS AND MADE GAME-WINNING PLAYS, BUT NOTHING GAVE ME THE SAME THRILL AS STANDING ON THAT STAGE AND HAVING ALL EYES ON YOU AS YOU DISPLAY YOUR MASTERPIECE THAT YOU ETCHED OUT FROM WEEKS OF ENDLESS DIETING, CARDIO AND TRAINING."

like Tom Platz and Paul "Quadzilla" DeMayo so impressive. Along with knotted, steel cable hams and beefy calves, Guy's legs are a strong point on a physique that's now proven to be one of the best in the division, with four pro wins and counting.

A BRIEF BACKSTORY ON GUY

Guy has been a pro for seven years now, but this is the first opportunity I have had to write about him. "Growing up, I was always infatuated with guys with muscles, plain and simple," he tells us. And it wasn't Arnold or Ronnie that he looked up to as a kid, it was his own father, a former college football player and boxer who was known for his well-built arms. There was also the WWF wrestler known as The Ultimate Warrior. "He was big and shredded, and was covered in veins from head to toe—that was the look I started to admire as time went on," says Cisternino.

Guy followed in his dad's footsteps and played football, all the way from Pop Warner in third grade through college. Not blessed with either height or natural bulk, his father bought him his first weight set in seventh grade. If he wasn't ever going to be one of the biggest kids on the gridiron, he would make damn sure he was the strongest. In the same garage where



SQUATS

If his knee is feeling good, Guy will squat right after leg extensions. Otherwise, they will be done later in the workout after leg presses and hack squats. "With these I use a shoulder-width stance, making sure my heels are on the ground, and I always go below parallel," he says. Rarely are standard straight sets on squats sufficiently challenging for Guy. He often ends with a drop set starting with 495 for 10 reps, cutting to 315 for another 10, or will superset front squats with squats, going up to 405 pounds.

the family of hunters would butcher deer every fall, Guy set up his home gym that eventually featured the original bench as well as a cable station for lat pulldowns and triceps pushdowns, and a leg extension/leg curl machine. "Every day I could come home from school, crank up the 'Rocky' soundtrack and work out," he remembers. "The only thing I had to follow were the MD magazines I bought along with the Weider Principle book."

After high school, Guy was recruited by several different Division I and II colleges, and wound up playing running back for Western Connecticut State University. By this time, he was already thoroughly in love with training and bodybuilding, and was able to grow from 160 to 180 pounds between freshman and sophomore years. It was the summer of 2003, just before he had to report to training camp for his junior year, that Guy decided to finally give competing in bodybuilding a shot. The nearby show he was going to make his debut at in New Jersey was cancelled at the last minute.



LEG PRESS

Speaking of drop sets, the leg press is where Guy usually does the longest and most brutally painful ones. The total number of reps can sometimes be 70-80. "With these, I don't go all the way down," he informs us. "Charles showed me to stop right before the hips start to roll. This takes the pressure off the back and hips, and ensures that you are keeping the load on the quads at all times."



SINGLE-LEG PRESS, BODY ANGLED SIDWAYS

This is definitely a leg movement you don't see every day, but Guy is a big fan of it. "Its main focus is on the outer sweep, as well as where the glute and hams meet," he says. "You have to make sure your body and foot positioning is right, or you won't feel it where it needs to be focused on." He emphasizes going very light until you do get that proper feeling and knack for the right motion track.

HACK SQUATS

"With hacks, I now do them more reverse than the standard way with your back on the pad," Guy tells us. "What this does is focus more on the quad, and squeezing at the top gives the glutes a ton of focus as well. At the top of the movement, you have to really push your hips forward and squeeze to really feel the contraction."

TRAINING SPLIT

Monday: Quads
Tuesday: Chest
Wednesday: Arms
Thursday: Back
Friday: Hamstrings
Saturday: OFF
Sunday: Shoulders



QUAD WORKOUT

Leg Extensions	4-5 x 12-15 (warm-up)
Leg Press	5 x 10-15 (last set is a triple drop for up to 50 reps)
Front Squats	4 x 10
<i>superset with</i>	
Squats	4 x 10
Reverse Hack Squats	4 x 10-15
Sideways Leg Press	4 x 10-15
<i>superset with</i>	
Wide-stance Sumo Squats*	4 x 10-15
*Holding on to a kettlebell or dumbbell.	

"NO MATTER WHERE I GO, THERE ALWAYS SEEMS TO BE SOMETHING GOING ON, GOOD OR BAD. WHETHER IT'S DRIVING IN A CAR, OR JUST A SIMPLE TRIP TO THE GROCERY STORE, I JUST ATTRACT ATTENTION, AND NOT ALWAYS THE GOOD KIND."

Undeterred, Guy found another contest the same day in West Virginia, and drove nine hours to win his class and the overall in the novice division, as well as his class in the open. He lost the overall to Fred Smalls, who would also go on to become an IFBB pro several years later.

Though he did play football for two more years, Guy knew his heart was in bodybuilding. "I had scored touchdowns, sacked quarterbacks and made game-winning plays, but nothing gave me the same thrill as standing on that stage and having all eyes on you as you display your masterpiece that you etched out from weeks of endless dieting, cardio and training," he says. In those two years, he would go directly from football practice to a full bodybuilding workout at the gym with only a protein bar between the two sessions to sustain him. Though he was never destined to be a professional athlete in the NFL, in the fall of 2008 he did earn pro status as a bodybuilder in the IFBB. And today he is one of its best 212 competitors.

ROMANIAN DEADLIFTS

"For stiff-leg deadlifts, I do them standard with my knees slightly bent," says Guy. "But what I don't do is come all the way up. That keeps the hamstrings under constant tension and working at all times."



THE ORIGIN OF THOSE FREAKY WHEELS

Even as a kid in third grade, Guy showed glimmers of the huge legs to come. His legs and calves were so stocky that his classmates called him "cankles." That early development was a product of all the sprinting he did as a Pop Warner running back, in full equipment. Once he began weight training to boost his prowess on the gridiron, he soon became the strongest kid on the team. His legs definitely responded faster than his upper body, and by the time he won the New York Metropolitan and took runner-up at his first NPC Nationals in 2007, several judges were already telling him that it might be a good idea to lay off training his legs for a while to allow his upper body to catch up. That was never an option in Guy's mind. "My thought process was if my legs were freaky, I might as well make them freakier," he says. "I just had to kill my upper body even harder to make it grow." He figured if Phil Heath never stopped training his arms, why should he back off on his legs? As it turned out, in 2011 something would happen that would eventually force him to forego all leg training for a while.

CRASH!

Guy was driving into Long Island at 11:30 a.m. on a clear and sunny day when a power company bucket truck did a sudden and illegal U-turn in front of him. Cisternino's car slammed into it at



'QUADRO' – NOT WHAT YOU THINK IT MEANS

Guy has his own clothing line called Quadro, and you would not be foolish to assume it has something to do with his outrageous quads. But you would be mistaken. Guy explains:

"A few years ago, my best friend Kris Lecomte always called me the 'scene' because he said no matter where I go, there always seems to be something going on, good or bad. Whether it's driving in a car, or just a simple trip to the grocery store, he said I just attract attention, and not always the good kind. It could be someone just wanting a picture with me in Starbucks, a flight attendant asking me to write them a diet on a plane, or having some idiot make a comment about me in a store that I could hear. Anyone who knows me knows I don't walk away from shit like that. If you are going to say something about me, expect to get a response. So one day at my house, he Googled the Italian translation for the word 'scene' and ironically enough, one of the words for it was quadro. He said, "Holy shit, how good is this? Not only does it mean the scene, but it has the word quad in it as well! It fits you perfectly," so that's how I branded that name, and now that's what many people refer to me by. I love being onstage, and hearing people scream out QUADROOOO definitely gets me fired up inside!"



LYING LEG CURLS

"I make sure before I curl the weight up that I squeeze my glutes," Guy says. "What this will do is restrict you from curling all the way up to your ass. If you have a spotter or training partner, you have them force the last quarter of the rep up for you. This has dramatically helped my ham development since I made that change in technique."

CONTEST HIGHLIGHTS

2008 NPC Nationals
2010 IFBB Battle of Champions
2010 IFBB Europa Supershow
2011 IFBB Jacksonville Pro
2011 IFBB Europa Supershow
2011 IFBB 202 Olympia Showdown
2012 IFBB New York Pro
2012 IFBB British Grand Prix
2012 IFBB North Carolina Muscle Heat Pro
2012 IFBB Toronto Pro
2012 IFBB 212 Olympia Showdown
2012 IFBB Sheru Classic, India
2013 IFBB Chicago Pro
2013 IFBB Phoenix Pro
2013 IFBB 212 Olympia Showdown
2014 IFBB Europa, Dallas
2014 IFBB Korean Grand Prix
2014 IFBB Prague Pro
2014 IFBB San Marino Pro
2014 IFBB Toronto Pro
2014 IFBB 212 Olympia Showdown
2015 IFBB New York Pro

Middleweight Winner
Sixth Place, 202 Class
Fifth Place, 202 Class
Second Place, 202 Class
202 Winner
13th Place
Fifth Place, 212 Class
12th Place, 212 Class
Third Place, 212 Class
Fourth Place, 212 Class
Seventh Place
Fourth Place, 212 Class
Second Place, 212 Class
Third Place, 212 Class
Seventh Place
212 Winner
Seventh Place, 212 Class
Fourth Place, 212 Class
Fourth Place, 212 Class
212 Winner
Eighth Place
212 Winner

roughly 65 miles an hour, was hooked by the bucket and was dragged down the street. Though he was covered in blood from shattered glass shards and his left leg, ribs and thumb were in pain, he was relieved to realize he had not been paralyzed. All was not well, however. His dashboard had caved in on his left knee and torn the meniscus, and two disks in his back were also herniated. Guy decided to forego surgery because he was determined to compete in that year's Olympia. Driving caused pain, and once he returned to training legs, "It was a bitch." He relied on knee wraps on leg days for the next few months. Not until 2013 did he finally get fed up with the pain and had the knee scoped. That was the longest he has ever gone without training legs, six weeks. Guy still deals with pain on most days, but he has adapted to the situation. "I still train as I usually have," he explains. "I just wear compression pants to help keep the blood flowing, and I always wrap my knees now when going heavy." Heavy for Cisternino is in the 10-15 rep range. His herniated disks do give him back problems on things like barbell rows and deadlifts, but the knee pain is merely "annoying."

LEG TRAINING CHANGES, AND WORKING WITH MR. GLASS

Although Guy has always loved training heavy and still does, he now places more emphasis on time under tension, something he picked up from training under Charles Glass out in Venice Beach. He's also begun to gravitate more toward machines than ever before. "I always thought machines were for the lazy people who didn't like to do the compound movements with free weights," he admits. "Working with Charles, I have found a new love for them, mainly because I don't use all the machines in their



standard way. Charles will take a machine used for quads and make it hit only hamstrings, and he can alter your form to also focus more on a certain area of the body that he wants it to hit.”

Many bodybuilders dream of training out west with Glass, and Guy agrees it's a revelation for any longtime bodybuilder. “Charles gave me a big ego check the first time I worked with him,” Cisternino begins. “He said to me, I know you're strong, but slow down the movement and let the muscles do the work. If you can do 500 for 15 reps, then do 405 for a slower 15 reps, because you will be working the muscle for a longer period of time, give it greater stress and focusing on other fibers that it normally doesn't get when you just move the weight.” Guy credits Charles with much of the improvement we have witnessed in his physique over the last two years.



“THIS YEAR ISN'T EVEN ABOUT CRACKING THE TOP FIVE. I TRULY BELIEVE I NOW HAVE THE TOOLS TO BE TOP THREE AND POTENTIALLY WIN THE OLYMPIA.”



STANDING CALF RAISES

“For this, all I will do is change my toe placements to hit the calves in different angles. Toes angled, toes angled out and toes straight.” Guy also recommends that you always make sure to use a full range of motion on all calf movements, raising all the way up to a full contraction, and lowering for a full stretch.

TOP 5 AT THE O THIS YEAR?

Guy has competed in the 212 Olympia Showdown for the last four years, but thus far a coveted top-five berth has evaded him. Now, with four pro wins including the New York Pro this past May, Cisternino feels that time is nigh. “I have been focusing on my overall physique and bringing up every body part with keeping my signature conditioning,” he tells us. “I think this year isn't even about cracking the top five. I truly believe I now have the tools to be top three and potentially win the Olympia. A few years ago, all I wanted was top six because I didn't feel my physique was there yet to be Mr. Olympia, but now with the improvements I made this year and only doing one show before the Olympia, I think I'm going to shock a lot of people.” Are you listening, Welsh Dragon and The Boston Mass? This leg monster is coming for blood! Win or lose, Guy will have some of the best wheels on the Olympia stage this year— regardless of the weight class.

Guy would like to thank his sponsor, Centurion Labz (www.centurionlabz.com) for their support and for giving him the opportunity to launch his own signature line, Quadro Series. Guy recently released his first product in the new line called Unrivaled, a unique post-workout blend featuring non-GMO whey protein isolate and highly branched cyclic dextrin (HBCD).



are judged on their physiques rather than the weight they use in the gym, they would have much more developed legs.” Did you all hear and understand that? I sure hope so, because I absolutely agree with Guy that this is what is keeping most bodybuilders from ever having great legs.

As for calves, those too are something it certainly helps to have the right genetics for, but still Guy is certain are not usually being worked properly. Many bodybuilders give up and rarely even work theirs. He recommends two workouts a week, a heavy day with sets of 10-12 reps, and lighter day with 20- to 30-rep sets in order to attack all the different types of muscle fibers.

SEATED CALF RAISES

“I just make sure to hold at the top to focus on the calves more,” Cisternino notes. “I see people throwing a ton of weight on the machine, when honestly you don’t have to use that much weight. Chances are if you are piling on a ton of plates, your range of motion sucks.”



“I SEE PEOPLE THROWING A TON OF WEIGHT ON THE MACHINE, WHEN HONESTLY YOU DON’T HAVE TO USE THAT MUCH WEIGHT. CHANCES ARE IF YOU ARE PILING ON A TON OF PLATES, YOUR RANGE OF MOTION SUCKS.”

WHY DON'T YOU HAVE LEGS LIKE GUY?

While Guy freely concedes that he was gifted with some extraordinary genetics for the entire lower body, he still feels most bodybuilders fall far short of their full leg development potential because they don’t train legs like a bodybuilder should. “Too many bodybuilders try to be powerlifters, and lift way too much weight with absolutely shitty form,” he declares. “I see it every day in the gym, guys doing half-reps, or using momentum to move the weight rather than their muscles. If they understood that judges don’t give a shit how much they lift and understand that they



PUSH
your limits. Then push further.



You let nothing get in the way. And neither do we.

Energize your workout with NO-Xplode®, the pre-workout igniter scientifically designed to deliver explosive energy and enhanced endurance.

Maximize performance, reach your goals - then push some more.



**EXPLOSIVE
ENERGY**



**ENHANCED
ENDURANCE**



**MAXIMUM
PERFORMANCE**

Visit goBSN.com to find your push.

GNC

**Vitamin
Shopper**

BSN

amazon.com

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

NOX-FL1 ©2015 BSN® For best results supplements should be taken as directed over time, at maximum dosage in conjunction with a healthy diet and regular exercise program. Results may vary.

WHERE HAVE THE SUPERSTARS GONE?

As Pro Contest Lineups Suffer From a Lack of Star Power, Insiders Are Wondering if the Current System Is Working

It was a small event on the IFBB's pro schedule. Few will remember the 1997 San Jose Pro. Even the most ardent fan has likely forgotten Flex Wheeler's victory that night, a triumph that saw him overcome a lineup of superstars; Nasser El Sonbaty, Mike Francois, Lee Priest, Paul Dillett and Ronnie Coleman rounded out the top six. The best bodybuilders in the world, gathered on the same stage, competing for one of the sport's **least** prestigious titles. Sadly, moments like this seldom happen anymore ... and it's becoming a serious problem.

As the years have passed, it's become trendy for top-tier bodybuilders to forego the smaller events, opting instead to limit their participation to contests of greater distinction and richer prize purses. Contest promoters have grown frustrated by their inability to lure big names to their contests, a reality that hinders fan interest, media attention and ticket sales. A



"It's become increasingly more expensive to prepare for a competition. For many of the top guys, it's simply a matter of economics. If you're a top-tier bodybuilder, it only makes sense to enter the highest-paying shows."
—Bob Cicherillo



"They would have to throw me a bone. I would love to do it."
—Phil Heath

quick review of recent pro lineups reveals that bodybuilding's biggest stars are simply avoiding the stage. Take a look at the top-four finishers from last year's Olympia. Phil Heath, Kai Greene, Shawn Rhoden and Dennis Wolf all chose to forego the entire 2015 schedule leading up to the Olympia. While it's common for an Olympia champion to avoid risking his title, it appears that the strategy has also been adopted by other top contenders. For many of the best bodybuilders in the world, the Olympia has become the only opportunity for their fans in the United States to see them compete (*some will compete on the post-Olympia overseas tour*).

EXPLAINING THE NEW TREND

There are several theories to explain why pro bodybuilders are competing less often. Perhaps it's simply a matter of health. The realities of a full-scale contest prep can take a toll on an athlete, causing many to compete less often in an effort to extend the length of their career. Others have suggested that athletes no longer have to compete in order to connect with fans, a theory supported by the role that social media now plays within the industry. Another theory focuses on the supplement companies. There was a time, not long ago, when supplement companies would require their sponsored athletes to compete a minimum number of times each year in order to effectively represent their brand. These days, companies are excluding contest requirements from athlete contracts, choosing instead to prioritize social media support and booth appearances.

Bob Cicherillo, the IFBB Athlete Representative for men's bodybuilding, offers up another theory. "It's become increasingly more expensive to prepare for a competition. For many of the top guys, it's simply a matter of economics. If you're a top-tier bodybuilder, it only makes sense to enter the highest-paying shows," Cicherillo continues, "The schedule has also changed over the years, giving way to many more shows on the post-Olympia portion of the schedule. So by the time we're out of October, pretty much all of the top athletes have already qualified for the following year's Olympia."

MD Senior Writer Ron Harris adds yet another theory. "Another reason the lineups are getting weaker, and probably the main reason in fact, is that there are now so many more pros. To be more blunt, it's much easier to turn pro now than it used to be, so you have plenty of men now with pro cards who would never have been able to stand on a pro stage in the past," Harris said.

Regardless of which theory you subscribe to, the undeniable truth is that pro lineups are suffering from a serious lack of star power.

EVEN ARNOLD CAN'T RECRUIT STARS!

Apparently, the issue isn't limited to just promoters of "smaller" events. There's a guy who promotes a contest each year in Ohio who is having similar challenges. The promoter's name

is Schwarzenegger, and his contest is also dealing with an unexpected decline in star power. Earlier this year, only one member of last year's Olympia top five opted to compete in Columbus. A year earlier, at the 2014 Arnold Classic, only two members of the prior year's Olympia top eight chose to compete in Columbus. During a recent interview with the NPC News Online, Phil Heath was asked if he would ever compete in Columbus. With little hesitation, the reigning champ looked directly into the camera and said to the fans, "I'm gonna ask you guys a simple question. Would you do the same 50-hour (a week) job for less money?" This was Heath's way of telling fans that the prize money at the Olympia is far more appealing than it is in Columbus. He added, "They would have to throw me a bone. I would love to do it."

Heath's comments were the latest reminder that bodybuilding is indeed a business ... and everyone has their price. MD Senior Editor

"The problem is LAZINESS! Back in the day, you had to bust your ass, suffer, work hard and prove yourself on the competitive stage!" —Chad Nicholls

Peter McGough has grown puzzled by the star shortage in Columbus, pointing out, "The megabucks and mega-prestigious Arnold Classic, where athletes receive hotel and flights paid for, only had 13 guys of sufficient standard invited to compete. Usually, the stampede to enter the Arnold is on par with the line to oil up the Bikini girls at the Olympia!"

THE POINT SYSTEM

In the spring of 2012, the IFBB Professional League, in conjunction with Joe Weider's Olympia Weekend, announced the creation of the Olympia Qualifying Series, a new point system developed for purposes of determining who would earn a spot on the Olympia stage. It seemed like a great idea at the time, as it provided motivation for the athletes to compete more often in an effort to accrue more points. Not only did the point system establish new criteria, but it also gave fans a glimmer of hope that contest lineups would include more of their favorite stars. Unfortunately, the point system also includes a provision that gives automatic qualifications to each of the previous year's Olympia top five, a caveat that gives the five best bodybuilders on the planet the opportunity to sit out the next 12 months. Cicherillo suggests a simple solution: "In my opinion, only the Mr. Olympia winner should automatically qualify for the following year's show."

SIMPLE SOLUTIONS TO A COMPLEX PROBLEM?

To be clear, the business of bodybuilding has never been better. The NPC is thriving with

record numbers of athlete entries, while fans continue to pack venues. The issue that we're dealing with here is limited only to the professional events and the absence of some of the sport's biggest stars. As with most problems, there's usually someone standing by to offer up a potential solution. Here at MD, we've assembled a panel of industry insiders, as we begin our crusade to bring the star power back to events of all sizes. The promoters deserve it ... and more importantly, the fans do to.

Peter McGough, MD Senior Editor

What might help is an overall restructuring of the calendar. At the moment, we have a string of shows just randomly spread throughout the year. Modifying the calendar to make it more formal and compact might make guys want to compete more often. My suggestion is to have the qualifying program split into separate time periods, to give the annual schedule a playing season feel. We're talking having maybe six contests back-to-back in March and April, beginning with the Arnold Classic. Then another clutch of six or so shows grouped together in late spring/early summer. And then another grouping of contests, later in the year, after the Olympia. That sort of sequence may encourage guys to make a run at contests on successive weeks, which means they can enter several contests on the back of just one contest-prep period.

Chad Nicholls, Contest-Prep Guru

The problem is LAZINESS! Back in the day, you had to bust your ass, suffer, work hard and prove yourself on the competitive stage! It was these athletes that received the opportunities to travel, appear in the magazines and become the stars of the sport. But now, you don't have to accomplish anything to be a social media star. The answer is simple. When we have the genetically gifted athletes that decide to flip the switch and take things to the next level, work hard—balls to the walls—and show it onstage, you will then have your next superstars. And if we are lucky enough to have one of these athletes cross over to be a social media star as well, then you will have the next megastar of the sport— but it starts in the same place where every one of our past superstars have come from— **HARD WORK IN THE GYM** and then **TAKE IT TO THE STAGE!**

Ron Harris, MD Senior Writer

You could say that making it tougher to turn pro again would improve the quality of lineups, but you can't go back once you have established the current system where X amount of pro cards are available. That system has been an enormous boon to national-level shows, as the dream of turning pro is what motivates nearly every amateur competitor. Take away their chance,

make it that much more difficult to turn pro, and it would hurt numbers at all those shows. And to be fair, considering the glut of pro cards available in newer divisions like MPD and Bikini, bodybuilders should also have the same relative opportunities. It's still much harder to turn pro as a bodybuilder, as fewer cards are given out for them compared to those divisions. Hell, the newer divisions even give out pro cards at the JUNIOR USA and Junior Nationals! Perhaps a motivator to get better star power in the pro lineups would be to increase the prize money. But that's easy for any of us to say— we aren't the ones who have to figure out how to come up with that money for them!

Shawn Ray, Hall-of-Fame Bodybuilder

There are too many contests and too little prize money. To put things in perspective, when I won my first pro show in 1990, the first-place prize was \$10,000— the same amount as many of the events on today's schedule. Point is, the economy and cost of living have changed dramatically, which affects a bodybuilder's choices and financial decisions as to when or what contests are financially worth competing in, leaving our industry's leading men on the sidelines, watching and waiting. Stars putting their lives on hold to compete in the bigger shows is not only a practical and healthy decision, but appears to be a financially responsible one, too. My solution is the immediate elimination of all \$10,000 pro open men's contests, and requiring all pro athletes, including Mr. Olympia, to start fresh each year and qualify to compete at the Mr. Olympia— by way of victory, and victory ONLY! No point system, no special invites, end of story, period. The Mr. Olympia should be the best of the best, and prize money should be given to EVERY qualifying athlete competing in the sport's most important event of the year.

"Only the Mr. Olympia winner should automatically qualify for the following year's show."

—Bob Cicherillo

Bob Cicherillo, IFBB Athlete Representative

As previously mentioned, the first thing I would do is have only the winner of the Olympia qualify. Next, I would hope the purses could be raised in an effort to attract bigger names. But every action has a reaction, and a consequence. Personally, I believe the whole system is generally backward and hasn't been updated to reflect the changing of the times, nor does it mirror the system that's been in place in the NPC for many years, with a proven track record of success (*visit MuscularDevelopment.com soon for Bob's detailed proposal to update the current system*).

"A motivator to get better star power in the pro lineups would be to increase the prize money. But that's easy for any of us to say— we aren't the ones who have to figure out how to come up with that money for them!"

—Ron Harris



T BOOSTERS:

COMPARING PHARMACEUTICALS TO SUPPLEMENTS

For centuries, men have been pursuing the promise of boosting testosterone (T)—even before they knew testosterone existed! When talking about “T boosters,” one has to track the change in testosterone in the blood to see any effect. Except ... it's not that easy. Testosterone fluctuates up and down all day, varying by 30 percent or more in healthy men, and actually less in older men. So, if one wants to show a boost in T, it is necessary to either take multiple samples and pool the blood to get an average, or plot the peaks and troughs in the treated versus untreated condition. And ... nobody does that.

Testosterone is produced primarily in the Leydig cells of the testes, when stimulated by the pituitary (a gland in the brain) hormone LH, which is released when T and estradiol (E2) is/are detected to be low. Testosterone and E2 are monitored in the hypothalamus, an area of the brain adjacent to the pituitary. When T and/or E2 are low, the hypothalamus tells the pituitary to send a signal (the hormone LH) to the Leydig cells to make more T.² As the Leydig cells produce more T, the concentration in the bloodstream rises to an acceptable “maximum,” the hypothalamus stops prompting the pituitary to release LH, and the Leydig cells slow down T production to the cellular equivalent of your car engine idling—just enough to keep everything from stalling.

Total T concentration in the blood (which is less relevant than free or bioavailable T concentrations) exists in a range generally defined as 350–1,000 ng/dL. This is very wide as a range, and many men demonstrate symptoms of T deficiency with values in the lower end of the “normal” range.³ Normal in this case means the values seen in all adult men of pretty much all ages, using the average \pm 2 standard deviations. It is a statistical range, not a physiological range. Are there advantages to being in the upper half, or even more so the upper quartile, over the lower quartile? Yes. Generally speaking, if a person has a T concentration above the average (statistical mean) of the normal range, T boosters are not going to increase the amount or effect of T in a significant way, statistically or practically—particularly in the long term.

CAUSES OF LOW T

Testosterone can be low if one or a combination of three glands are affected by a pathologic condition or pathologic state.² In other words, if the body has a health condition that affects the hypothalamus, pituitary and/or testes (directly or indirectly), then the production of T will decrease to the point that a person suffers subjective (“feel-able”) changes and/or altered functioning of a number of systems and tissues in the body. There is also the possibility that “total T” may be “normal,” but due to a high concentration of the binding protein SHBG, free T is low, producing the same conditions. The hypothalamus “senses” the amount of T and E2

present, and determines what is appropriate to respond to the conditions it detects. Many men express symptoms of low T due to a decrease in either total and/or free T in common conditions, such as obesity, type 2 diabetes and opioid painkiller use/abuse. Inflammation may be a factor in secondary hypogonadism affecting the hypothalamic-pituitary axis; sometimes, low T due to a hypothalamic condition is called tertiary hypogonadism. Tumors or estrogen excess are common causes of pituitary-related low T, or certain drugs that increase prolactin. Primary hypogonadism is low T due to a failure of the Leydig cells to produce sufficient T when there is a signal to do so from the pituitary. Lastly, many cases of low T are a combination of two or three of the above. It is a medical condition that should be properly diagnosed before beginning treatment.

PATHWAY TO POTENCY

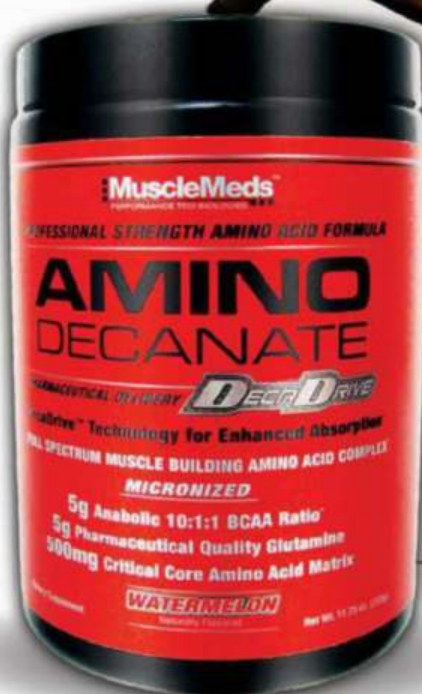
So, in an otherwise healthy man, when T is low, or not high enough to suit the desires of the individual, the pathway to potency can follow a few different routes. Those who have used anabolic-androgenic steroids (AAS) will recognize most of these points as being similar to post-cycle recovery treatment (PCT).⁴

First, the condition of the body needs to be optimized. This includes attaining good glucose tolerance (or reducing insulin resistance); reducing body fat to a healthy range (no more than 14–18% for men); lowering inflammation; normalizing the sleep cycle; and increasing cellular antioxidant state (especially in the Leydig cells). High blood sugar and high insulin both interfere with T production, so it is important to avoid carb-binging—especially on high-glycemic foods. If prediabetes has set in, following a low-glycemic load diet and exercising daily (moderately) will help restore insulin sensitivity. Obesity interferes with T production in a number of ways: chronic, low-grade inflammation; increased aromatization (high E2); reduced exercise tolerance; leptin resistance, etc. This is primarily due to an excess in white adipose tissue (body fat), though the presence of liver fat makes matters worse. Thus, lowering body fat to “athletic” levels of 14 to 18 percent for men will remove the interference of these factors. Bodybuilders dropping body fat to mid- or low-single digit percentages often see low T values as well, due to caloric restriction. Sleep calibrates numerous neuroendocrine systems, and promotes the release of the pineal hormone melatonin. In addition to acting via specific receptors, melatonin is a potent antioxidant. Altered or disrupted sleep cycles commonly result in impaired glucose tolerance, fat accretion and even increases in cardiovascular- and cancer-related deaths. Cellular antioxidant levels are necessary to combat the free radicals produced during the energy-requiring processes of cellular function and by pro-oxidant “toxins.” Glutathione is a primary cellular antioxidant, and can be increased with N-acetylcysteine

BUILD PROTECT REPAIR!

AMINO DECANATE is the most powerful and advanced amino acid complex available, designed to trigger maximum anabolic effects and prevent rate limiting amino acid deficiencies and catabolism often experienced during intense workouts. Each serving of AMINO DECANATE provides 5 grams of BCAAs in a highly anabolic 10:1:1 ratio yielding over 4 grams of leucine, plus 5 grams of pharmaceutical quality glutamine and 500 mg of 15 other amino acids known as Critical Core Amino Acids (CCAAs) for peak muscle building, maximum performance and optimal recovery. To enhance the bio-availability and potency of this already highly anabolic formula, AMINO DECANATE features MuscleMeds exclusive DecaDrive Delivery Technology!

COMPLETE MUSCLE BUILDING & PERFORMANCE FORMULA



5g Anabolic
10:1:1 Leucine
Loaded BCAA
Complex

5g Pharmaceutical
Grade Glutamine

500mg Critical
Core Amino Acid
Matrix

N. Trigli
NICK "3D" TRIGLI
TEAM MUSCLEMEDS

STRONGER Than The Rest!

Exclusive DecaDrive Technology!

V theVitamin
Shopper
every body matters

B
BODYBUILDING.COM

Join Team MuscleMeds!
facebook.com/TeamMuscleMeds
twitter: @MuscleMeds
Instagram: MUSCLEMEDS

1.888.575.7067
MuscleMedsRx.com

MuscleMeds
PERFORMANCE TECHNOLOGIES

TESTOSTERONE

(NAC) supplementation. Men with excess iron stores (a potent pro-oxidant) become hypogonadal. Studies have shown that antioxidants maintain Leydig cell function in conditions of increased stimulation to produce T. Taurine and grape seed extract may play protective roles as well.

WHEN T BOOSTERS DON'T CUT IT

Bear in mind, sometimes the body will not respond to T boosters. This is often the case after long-term AAS abuse, as one study showed men who previously used AAS, presenting with both a low T and low LH, did not respond to gonadotropin-releasing hormone (GnRH) or human chorionic gonadotropin (hCG).⁵ Only five of the 13 were able to produce a minimal amount of LH in response to GnRH, and none met the minimum for T after hCG. So, it is possible that long-term AAS abuse may eventually lead to a point where the only solution is testosterone replacement. AND, future fatherhood may no longer be an option. Consider that when evaluating the cost-to-benefit of AAS misuse. Further, in a review of the patients at a large university center being treated for hypogonadism (low T), it was discovered that those who had profound low T (under 50 ng/dL), and were hypogonadal prior to age 50, had a 10 times greater incidence of prior AAS misuse/abuse.⁶

To increase T output, an increased signal is often required. Lowering inflammation, increasing cellular antioxidant state and regulating sleep helps immensely with normal function to the conditions present. It is important that the natural pattern of T production be respected when attempting to increase T output, as the body will “shut down” if faced with constant demand for “more T, MORE T!” In fact, one method used to shut down T production for men with prostate cancer, or in studies where T replacement is being studied, is to supply a long-acting form of GnRH (the signal from the hypothalamus to the pituitary) called leuprolide. When the pituitary gonadotropin cells are hit with a long-acting signal, they become desensitized and stop sending out LH to boost T production. This results in extremely low T values. The Leydig cells are “flatlined.” There is not a

practical manner of offering pulsatile GnRH. So, the best option relative to the hypothalamus is to keep it healthy.

E2 reduces GnRH release, but also LH release by acting on the pituitary. E2 is elevated in obesity, and often in men using aromatizable AAS.⁵ Endocrine disruptors are chemicals present in plastics, present in food or water as pollutants or pesticides, or other sources. These can affect the body as “xenoestrogens,” meaning they act as estrogens. It is a real and understudied issue that affects metabolic health. In the absence of AAS use, lowering body fat is a good first step in reducing E2. Aromatase inhibitors can be used, and were reported to increase serum (blood) T from 250 ng/dL to 620 ng/dL in a study that provided letrozole at a dose of 2.5 milligrams per week.⁷ Another class of drug often used is SERMs, such as clomiphene, tamoxifen and raloxifene. However, though clomiphene is effective at increasing T production by “boosting” pituitary function, it also increases E2. Therefore, one needs to consider the physiology of the person being treated when selecting an E2-combating drug.

CLOMIPHENE VS. ANASTROZOLE

Only recently has a head-to-head study between aromatase inhibitors and clomiphene been reported in otherwise healthy men.⁸ In fact, the findings demonstrate that clomiphene is a more potent “booster” of testosterone, but the T:E2 ratio (testosterone to estradiol) is more favorably impacted by anastrozole. Again, this demonstrates that each method has pros and cons to consider. In this study, clomiphene (25 mg/day) raised T in men with low baseline values (under 350 ng/dL) to an average value of 571 ng/dL— whereas anastrozole (1 mg/day) only raised T to 408 ng/dL. However, E2 increased with clomiphene and decreased with anastrozole, resulting in a significant change in the T:E2 ratio for the anastrozole-treated group only. Also, the clomiphene results were much greater in this study than a prior one following infertile men treated with clomiphene for an average duration of 19 months, resulting in a final T of only 485 ng/dL.⁹

If the testes are capable of responding to LH, a more effective boost can be given using the fertility drug hCG. A hormone derived from the placenta during pregnancy, hCG attaches to the same receptor as LH, but is more potent and lasts much longer. In fact, it is important not to use hCG in too high a dose or too often. Though it has not been well studied, it appears that the optimal dosing schedule may approximate 500 IU, two to three times weekly. This is the dosing suggested for use of men on TRT to maintain Leydig cell function during pituitary suppression. Some protocols use as much as 3,000 IU every other day for infertile men with low T, based on early use derived from female fertility protocols. Higher or more frequent dosing may “burn out” the Leydig cells, and result in long-term reduction of T production. hCG therapy is reported to maintain T concentration around 512 ng/dL when provided long-term to men with low T.¹⁰ Note, some subjects responded more vigorously to all treatments, but as many responded less so. Many centers have progressed to combining hCG with clomiphene or an aromatase inhibitor for greater effect.

How effective are these approaches? They have been shown to be effective for most men not suffering from primary hypogonadism. Fertility clinics typically use clomiphene, often in combination with hCG, to increase sperm count and quality in hypogonadal, infertile men (men with low T who cannot conceive— get a woman pregnant). Bodybuilders who suffer long-term suppression due to AAS abuse have been reported to successfully recover endogenous (natural) testosterone (and sperm) production using the same agents contained in traditional PCT gym lore.^{2,4,11}

If these agents are so potent, why are they NOT being used as anabolics? The answer is because they do not make the testes turn into “superballs.”



For Active Individuals

**WHEY PROTEIN
IN 1 SCOOP**

BCAAs

ASPARTAME & TRANS FAT

For Serious Trainers

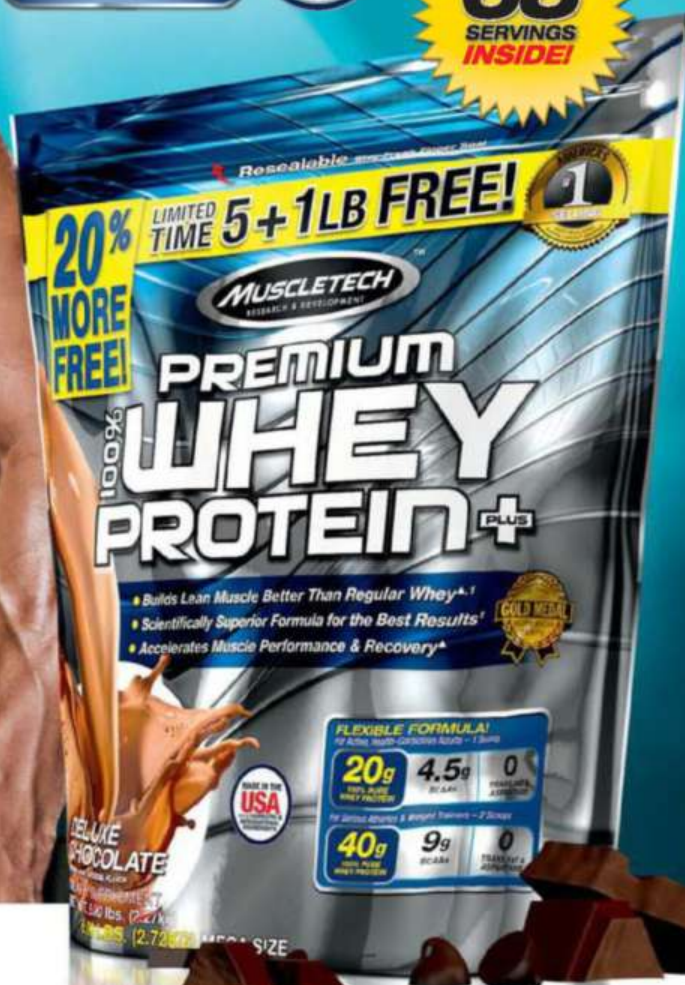
**WHEY PROTEIN
IN 3 SCOOPS**

BCAA's

**FROM DOMESTIC
INTERNATIONAL
INGREDIENTS**

NEW! 6LB
LIMITED-TIME
VALUE SIZE

68
SERVINGS
INSIDE!



THE
BEST PROTEIN
VALUE JUST GOT BIGGER!

20% MORE PROTEIN AT THE SAME SAM'S CLUB PRICE

Get 100% Premium Whey Protein Plus at your local Sam's Club!

- Builds lean muscle better than regular whey¹
- Accelerates recovery after exercise
- Tastes amazing and mixes instantly
- Available in Deluxe Chocolate and Deluxe Vanilla

Available at



¹Subjects combining the core ingredients in MuscleTech® Premium Whey Protein Plus (creatine and whey protein) with a weight training program gained 70% more lean muscle than subjects using regular whey protein (8.8 vs. 5.1 lbs.). Read label before use. © 2015

TESTOSTERONE

VIAGRA AND PDE5 INHIBITORS

One last class of drug that also may “boost” T, among other beneficial effects, are PDE5 inhibitors, best known for Viagra. Though the primary effect is on opening blood vessels to promote penile erection, PDE5i drugs also promote steroidogenesis (T production) in Leydig cells. In fact, users of PDE5i drugs have been reported to see increases in T, though the final concentration is similar to the agents listed above.¹²

Yet, if these agents are so potent, why are they NOT being used as anabolics? After all, they are relatively inexpensive, not controlled substances, more easily obtained and do not require intramuscular injections. The answer is because they do not make the testes turn into “superballs.” Though acute spikes may be seen with the use of some agents, the physiologic response is a return to normal. No bodybuilder does a cycle relying only upon hCG or clomiphene. They are adjunct drugs; meaning they treat/prevent a side effect, not provide an anabolic effect. Consider when looking at these numbers, the threshold testosterone concentration determined to be necessary to affect muscle mass—1,046 ng/dL.¹³

The take-home message is that for the healthy, young, virile male with mid- to high-normal T, it is highly unlikely that any practical “T boosting” effect will be noted, even using the pharmaceutical drugs that enable restoration of T production post-cycle by AAS misusing/abusing men. The exception may be in the use of aromatase inhibitors if a condition of elevated E2 is present. For those with low or low-normal T, these drugs will offer feelable benefit, but not the supraphysiologic or anabolic effects some may be seeking. As with any pharmaceuticals, there is potential for adverse side effects, and specific questions must be directed to one’s personal health care provider. ■

References:

1. Sandroni P. Aphrodisiacs past and present: a historical review. *Clin Auton Res* 2001;11:303-7.
2. Crosnoe-Shipley LE, Elkelay OO, et al. Treatment of hypogonadotropic male hypogonadism: Case-based scenarios. *World J Nephrol* 2015;4:245-53.
3. Scovell JM, Ramasamy R, et al. Hypogonadal symptoms in young men are associated with a serum total testosterone threshold of 400 ng/dL. *BJU Int* 2015;116:142-6.
4. Karavolos S, Reynolds M, et al. Male central hypogonadism secondary to exogenous androgens: a review of the drugs and protocols highlighted by the online community of users for prevention and/or mitigation of adverse effects. *Clin Endocrinol* 2015;82:624-32.
5. Flanagan JN, Lehtihel M. The Response to Gonadotropin-Releasing Hormone and hCG in Men with Prior Chronic Androgen Steroid Abuse and Clinical Hypogonadism. *Horm Metab Res* 2015;47:668-73.
6. Coward RM, Rajanahally S, et al. Anabolic steroid induced hypogonadism in young men. *J Urol* 2013;190:2200-5.
7. Loves S, de Jong J, et al. Somatic and psychological effects of low-dose aromatase inhibition in men with

obesity-related hypogonadotropic hypotestosteronemia. *Eur J Endocrinol* 2013;169:705-14.

8. Helo S, Ellen J, et al. A Randomized Prospective Double-Blind Comparison Trial of Clomiphene Citrate and Anastrozole in Raising Testosterone in Hypogonadal Infertile Men. *J Sex Med* 2015 Jul 14. [Epub, ahead of print]

9. Katz DJ, Nabulsi O, et al. Outcomes of clomiphene citrate treatment in young hypogonadal men. *BJU Int* 2012;110:573-8.

10. Ismailogullari S, Korkmaz C, et al. Impact of long-term gonadotropin replacement treatment on sleep in men with idiopathic hypogonadotropic hypogonadism. *J Sex Med* 2011;8:2090-7.

11. Rahnema CD, Lipshultz LI, et al. Anabolic steroid-induced hypogonadism: diagnosis and treatment. *Fertil Steril* 2014;101:1271-9.

12. Spitzer M, Bhasin S, et al. Sildenafil increases serum testosterone levels by a direct action on the testes. *Andrology* 2013;1:913-8.

13. Sattler F, Bhasin S, et al. Testosterone threshold levels and lean tissue mass targets needed to enhance skeletal muscle strength and function: the HORMA trial. *J Gerontol A Biol Sci Med Sci* 2011;66:122-9.

LEGEND FITNESS™

PRESENTING
Our NEW pin select
series...

SELECT EDGE™



www.LegendFitness.com

866.753.4363



Ric Collins, Esq.



COLLINS, McDONALD & GANN, P.C.
ATTORNEYS AT LAW

For Legal Counsel You Can Trust...

Turn to the "Legal Muscle"
Trusted for Years by the Health, Fitness
and Bodybuilding Communities
Call 516.294.0300

Ric Collins, Esq., author of *Legal Muscle* -- the definitive resource on performance-enhancing drugs and the law -- and the author of the new men's health/fitness boo *Alpha Male Challenge* and the lawyers at COLLINS, McDONALD & GANN, P.C. offer unsurpassed knowledge, experience -- and results -- when it comes to advocating for your rights ... and protecting your future.

Call us at **516.294.0300**
for a free consultation to
discuss your legal needs.

If You Are Faced With a Legal Problem, Your Best Defense... is the Right Defense

- The country's foremost legal authorities on performance enhancing drugs and supplements
- Counsel to the IFBB Pro Division
- Attorneys for top sports nutrition companies and counsel to many supplement manufacturers and distributors
- Strategic legal counsel in the areas of anabolic steroids law, supplement law and general criminal defense
- Advocates for the dietary supplement industry
- Successfully representing a wide variety of high profile cases/general cases -- concentrating in bodybuilding and fitness clients nationwide
- Consulting services available

WWW.CMGESQ.COM WWW.STEROIDLAW.COM WWW.SUPPLEMENTCOUNSEL.COM

138 MINEOLA BLVD, MINEOLA, NY 11501 PHONE: 516-294-0300 FAX: 516-294-0477 WEB: WWW.CMGESQ.COM



COLLINS, McDONALD & GANN, P.C.
ATTORNEYS AT LAW

The law firm dedicated to bodybuilders,
strength athletes, and everyone in the health
and fitness community since 1990.

WHY MD IS THE #1 SOURCE FOR BODYBUILDING SCIENCE

In this interconnected world we live in, where the average person in America consumes roughly 34 gigabytes of information on a daily basis by way of television, computer, radio and print¹, it is very easy to come across bad information that at first glance appears to be legitimate, yet turns out to be completely untrue. Of course, it's one thing to heed poor advice when it is about relatively unimportant events like what movie to see or what car, clothes or computer you should purchase. But when it comes to your body and the ability to build a bigger, stronger, leaner, more muscular physique, you should absolutely demand the best advice you can find that will produce the results you desire.

Hey, look, we've all sat through a bad movie or purchased an ugly shirt or pair of pants. I know I have, and while that might be somewhat annoying and inconvenient, it is nowhere near as frustrating as getting bad information about how to get bigger, leaner and stronger. Not only may this poor information inhibit progress in the gym that will likely discourage you from training in the future, but it may also lead to serious injury that would halt your training entirely for a lengthy period of time.

Well, this is where MD plays a pivotal role as your number one source for bodybuilding science, by providing extremely reliable and relevant information that will help you achieve every single one of your training goals. MD obtains this indispensable information by spending countless hours researching study after study in the scientific literature, and distilling out the most relevant findings for our readers so they can use this information to advance their training.

MD also employs its expertise in various scientific disciplines such as molecular biology, biochemistry, genetics and physiology— then combines this theoretical knowledge with our passion for training, to gain unique insight into the complex nature of exercise, that immensely improves our capacity to separate fact from fiction when talking about some of the most common, yet misun-

derstood, nutritional and training practices used today. This unique viewpoint also helps us bring forth some of the most innovative muscle-building training techniques, so you can advance your training in ways you never thought possible.

MD SEPARATES FACT FROM FICTION REGARDING THE USE OF BCAAs

Supplementing your diet with the branched-chain amino acids (BCAAs) leucine, isoleucine and valine has been very popular for quite some time, largely because of the apparent misunderstanding that all three BCAAs equivalently increase muscle growth. While each BCAA does promote muscle growth, they do not stimulate muscle growth to the same degree. In fact, it's not even close as leucine is, by far, the most potent stimulator of muscle growth, while isoleucine and valine come in a very distant second and third place, respectively.^{2,3}

Now, don't get me wrong— isoleucine and valine do have ergogenic effects, but they really should not be consumed with the hope of improving muscle size— and they definitely should not be simultaneously ingested with leucine, as this will produce antagonistic effects that diminish the performance-enhancing results associated with all three BCAAs.

One example of the incompatibility between isoleucine and leucine is the ability of isoleucine to increase the influx of glucose into the muscle cell and increase the rate at which glucose is converted into energy within muscle⁴, while leucine consumption only increases glucose influx into the muscle cell. After that, glucose is simply converted

into glycogen for energy storage instead of being immediately burned for energy.⁵ The antagonistic influence of isoleucine and leucine on glucose metabolism within the muscle cell indicates that co-consumption of these two BCAAs is likely unproductive, and should be avoided. Alternatively, the use of isoleucine and leucine at different times should generate superior performance enhancement, particularly if isoleucine use occurs before training to maximize energy production, and leucine use takes place post-workout to increase the anabolic response to training.

Co-ingesting valine with leucine also produces unwanted antagonistic effects, as valine improves exercise performance, in part, by lowering production of the neurotransmitter serotonin during exercise by directly inhibiting transport of the serotonin-precursor tryptophan— resulting in a diminished conversion of tryptophan into serotonin.⁶ Since serotonin tends to bring about sluggishness and fatigue in the gym, the reduction in serotonin levels from valine intake enhances performance. So, it seems pretty simple— take a handful of BCAAs containing valine before your workout to lower serotonin levels and reduce fatigue, and you'll be good to go. Well, unfortunately it's not that simple.

As it turns out, exercise-induced fatigue is actually influenced more heavily by the ratio of serotonin to another neurotransmitter, dopamine⁷, where higher serotonin to dopamine ratios increase fatigue. As a result, simply taking BCAAs will not reduce tiredness, because BCAAs do more than simply lower serotonin— since leucine also prevents the uptake of the dopamine-precursor tyrosine into the brain, ultimately reducing dopa-

MD plays a pivotal role as your number one source for bodybuilding science, by providing extremely reliable and relevant information that will help you achieve every single one of your training goals.

**NEW 5LB
VALUE SIZE**

OWN IT

BECOME GREATNESS

SIX STARTM
PRO NUTRITION

Whey Protein Plus – The Choice of Elite Athletes

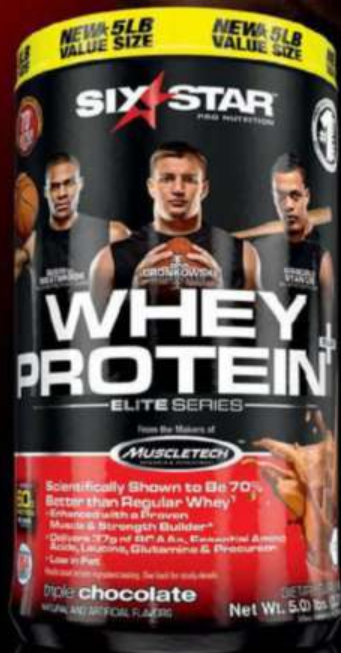
- ▶ 60g of protein per 2 scoops – ideal for flexible dosing
- ▶ Enhanced with a clinically proven muscle & strength builder – delivers the performance results you want
- ▶ In a 6-week study, subjects combining the core ingredients in **Six Star® Whey Protein Plus** with a weight training program gained 70% more lean muscle than subjects using regular whey protein (8.8 lbs. vs. 5.1 lbs.)
- ▶ Delicious, satisfying milkshake taste

#BecomeGreatness

facebook.com/SixStar @SixStarPro sbstarpronutrition

SixStarPro.com

*MuscleTech® is America's #1 Selling Body Building Supplement Brand based on cumulative wholesale dollar sales 2001 to present. Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015



PREMIUM SUPPLEMENTS. SMART PRICE.

Available at
Walmart

mine production.⁸ Of course, this would counteract any positive effect that valine might have by reducing serotonin levels, as the simultaneous reduction in dopamine levels would reestablish a serotonin to dopamine ratio that promotes fatigue.

So, once again, the opposing functions of BCAAs—in this case, valine and leucine—reveals that co-ingesting them is unproductive, and they should be consumed separately. Valine should be taken before exercise to optimally hinder pre-workout fatigue, and leucine should be taken after training to induce relaxation that promotes full recuperation.

THE BEST SCIENTIFICALLY SUPPORTED TRAINING TECHNIQUES

While there are many training techniques that promote muscle growth, here are a few very unique, and somewhat unorthodox, training methods highlighted by MD in the past that boost muscle hypertrophy and strength in very novel ways. These cutting-edge approaches have been proven by science to drive the hypertrophic response, triggering considerable gains in muscle size and strength. MD advocates unconventional weightlifting techniques that result in unconventional gains in size and strength!

The central dogma in most gyms states that heavy training is absolutely required to produce large muscles. While that is essentially true most of the time, an alternative training method, known as Kaatsu training, that incorporates the use of lighter weights with blood flow restriction to the working muscle, has also been shown to have a remarkably potent muscle-boosting effect. This unorthodox mode of training only requires lifting lighter loads of roughly 20 to 30 percent of your

one-repetition maximum to muscle failure. While restricting blood flow to working muscles may sound unsafe, this type of training is very safe when performed correctly, and very effective at increasing muscle growth when performed correctly.

The remarkable capacity of Kaatsu training to enhance muscular development comes from the preferential activation of fast-twitch muscle fibers, primarily by depleting oxygen levels to the working muscles due to the restriction of blood flow. The depletion of oxygen drives the muscle cell to produce energy without oxygen, or anaerobically, which preferentially activates fast-twitch fibers over slow-twitch fibers because fast-twitch muscle fibers prefer anaerobic respiration, while slow-twitch muscle fibers favor aerobic respiration.⁹ Because fast-twitch fibers have the greatest potential for muscle growth and strength production, their preferential stimulation over slow-twitch muscle fibers is more conducive to muscle growth and strength.

COMBINE TRAINING AND SUPPLEMENTATION THAT ARE COMPLEMENTARY AT THE BIOCHEMICAL LEVEL

Cluster set training involves the use of a weight that you can lift for a specific amount of repetitions—and instead of lifting the weight uninterrupted for a complete set, you break the set up into mini-sets where you only lift the weight for roughly one-third of the total repetitions that you normally perform successively. After each mini-set, you rack the bar and wait 10 to 30 seconds, and repeat the process until you surpass the total number of repetitions that you can perform without interruption by at least one repetition.

As an example of cluster set training, let's say

you can bench press 275 pounds for five successive repetitions. Well, during a cluster set you would lift the 275 for the first mini-set within the cluster for two repetitions, rack the weight, wait for 10 to 30 seconds and repeat two more times, or for two more mini-sets, within the first cluster. This would give a total of six repetitions with 275 pounds, meaning you performed one more repetition within the cluster set than you normally perform during a regular set, with no rest between repetitions.

The key muscle-enhancing stimulus from cluster set training centers on the increase in repetitions performed during a cluster set relative to a standard set. This effect potentially triggers considerable gains in muscle growth and strength.

So, what is it about cluster set training that allows the performance of additional repetitions? It has to do specifically with the rest periods between mini-sets that, as I mentioned before, must be as long as 10 to 30 seconds to sufficiently restore energy levels within the muscle cell, to fuel the additional muscular contraction required for the extra repetitions.

The precise reason for the 10- to 30-second rest period has to do with the fact that intense weight training primarily burns ATP and phosphocreatine (PC) to provide the energy required for muscular contraction, and 10 to 30 seconds is the amount of time required to sufficiently replenish the ATP and PC stores within the muscle cell.¹⁰ So, these relatively short rest periods are the perfect amount of time to resupply the ATP/PC energy system used during intense weight training.

What's more, knowing that restoration of the ATP/PC energy system during cluster set training produces the training effect, it is plausible that supplementing with creatine monohydrate should further improve the positive influence of cluster set training, as ingesting creatine has been shown to increase PC levels by as much as 20 percent.^{11,12} This, of course, would make the recuperative response of the ATP/PC system to cluster set training much more robust—resulting in improved muscular performance while using this training method for an even greater training stimulus that produces superior levels of muscle growth. ■

MD obtains indispensable information by spending countless hours researching study after study in the scientific literature, and distilling out the most relevant findings for our readers so they can use this information to advance their training.

For most of Michael Rudolph's career he has been engrossed in the exercise world as either an athlete (he played college football at Hofstra University), personal trainer or as a research scientist (he earned a B.Sc. in Exercise Science at Hofstra University and a Ph.D. in Biochemistry and Molecular Biology from Stony Brook University). After earning his Ph.D., Michael investigated the molecular biology of exercise as a fellow at Harvard Medical School and Columbia University for over eight years. That research contributed seminally to understanding the function of the incredibly important cellular energy sensor AMPK—leading to numerous publications in peer-reviewed journals including the journal *Nature*. Michael is currently a scientist working at the New York Structural Biology Center doing contract work for the Department of Defense on a project involving national security.

References:

1. Bilton N. The American Diet: 34 Gigabytes a Day. *New York Times*, 2009.
2. Blomstrand E, et al. Branched-chain amino acids activate key enzymes in protein synthesis after physical exercise. *J Nutr* 2006;136(1 Suppl): p. 269S-73S.
3. Shimomura Y, et al. Nutraceutical effects of branched-chain amino acids on skeletal muscle. *J Nutr* 2006;136(2): p. 529S-532S.
4. Doi M, et al. Hypoglycemic effect of isoleucine involves increased muscle glucose uptake and whole body glucose oxidation and decreased hepatic gluconeogenesis. *Am J*

Physiol Endocrinol Metab 2007;29(2): p. E1683-93.

5. Di Camillo B, et al. Leucine modulates dynamic phosphorylation events in insulin signaling pathway and enhances insulin-dependent glycogen synthesis in human skeletal muscle cells. *BMC Cell Biol* 2014;15: p. 9.

6. Fernstrom JD. Large neutral amino acids: dietary effects on brain neurochemistry and function. *Amino Acids* 2013;45(3): p. 419-30.

7. Acworth I, et al. Effect of sustained exercise on concentrations of plasma aromatic and branched-chain amino acids and brain amines. *Biochem Biophys Res Commun* 1986;137(1): p. 149-53.

8. Choi S, et al. Oral branched-chain amino acid supplements that reduce brain serotonin during exercise in rats also lower brain catecholamines. *Amino Acids* 2013;45(5): p. 1133-42.

9. Idstrom JP, et al. Energy metabolism in relation to oxygen supply in contracting rat skeletal muscle. *Fed Proc* 1986;45(13): p. 2937-41.

10. Wells GD, Selvadurai H and Tein I. Bioenergetic provision of energy for muscular activity. *Paediatr Respir Rev* 2009;10(3): p. 83-90.

11. Engelhardt M, et al. Creatine supplementation in endurance sports. *Med Sci Sports Exerc* 1998;30(7): p. 1123-9.

12. Graham AS and Hatton RC. Creatine: a review of efficacy and safety. *J Am Pharm Assoc (Wash)* 1999;39(6): p. 803-10; quiz 875-7.



NEW

ROB GRONKOWSKI
ALL-PRO TIGHT END

OWN
BECOME GREATNESS
IT

Pre-Workout Explosion – delivers your most explosive workouts ever.

- ▶ Energy, focus & intensity
- ▶ Explosive muscle pumps
- ▶ Clinically validated amounts of key ingredients

BETTER WORKOUTS – TRY IT TODAY!



WIN TICKETS TO THE
BIG GAME!
Sunday, February 7, 2016

Visit
SixStarPro.com
to Enter
No purchase necessary.



#BecomeGreatness

f facebook.com/SixStar @SixStarPro sixstarpronutrition

SixStarPro.com

*MuscleTech® is America's #1 Selling Body Building Supplement Brand based on cumulative wholesale dollar sales 2001 to present. Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

PREMIUM SUPPLEMENTS. SMART PRICE.

Available at
Walmart



CIALIS

MAY BEEF UP AAS EFFECTS

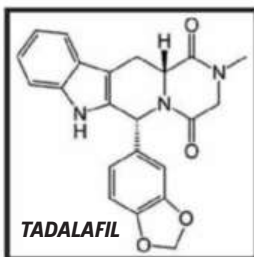


A study of interest this month comes from researchers at the University of Rome. In a paper just published in the *Journal of Endocrinological Investigation*, they presented data that could suggest Cialis, generic name tadalafil, might make an effective supportive agent during the use of anabolic-androgenic steroids (AAS).¹ And we're not talking about treating sexual problems like "Deca dick" here, as it is commonly called. We are talking about tadalafil potentially having a direct effect on the anabolic productivity of a cycle. Is this possible? Can a "boner pill" really help make bigger and stronger steroid users? It is too early to judge based on this data alone, but I do think this is still a topic worthy of discussion. Let's review and see what this latest research is all about.

First, let's go over some background. Tadalafil is a phosphodiesterase-5 (PDE-5) inhibitor. It sits in the same class of drugs as Viagra. PDE-5 inhibitors are widely prescribed to older men for the treatment of erectile dysfunction, and have already been associated with an increased testosterone level in some patients.² The researchers in Rome sought to take this research one step further by examining the effects of tadalafil on two specific activities of testosterone. The first is the ability of the androgen to be converted to estrogen by aromatase. Next, they wanted to see if the drug would influence androgen receptor expression. Blood hormone levels are, of course, only one side of the equation. An effect on androgen receptors could substantially increase or decrease testosterone's activity, depending on the direction.

What the researchers found was quite interesting, hence the article. Using in vitro cell models, they demonstrated that tadalafil acted partly as an aromatase inhibitor. It decreased the estrogen-synthesizing capacity of the incubated cells. This may explain why PDE-5 inhibitors have been associated with increased testosterone/estrogen ratio. They could simply be increasing testosterone by lowering estrogen, which serves as a feedback mechanism for testosterone biosynthesis. More interestingly, perhaps, they also found tadalafil to increase the expression of cellular androgen receptors. This could, in turn, sensitize cells to the actions of testosterone, making a given blood level more productive. Since there are plenty of drugs that effectively (much more so) counter aromatase and lower estrogen, it is the androgen receptor finding in this paper that I'm really interested in.

This isn't the first time we've heard of the potential for PDE-5 inhibitors to enhance bodybuilding performance. These drugs have been the subjects of quiet but regular such discussion for years now. This mainly stems from how they work. PDE-5 inhibitors increase nitric oxide synthesis, and in turn blood flow to the penis. The nitric oxide effect is not so localized, however. The same mechanism may trigger vasodilation of blood vessels leading to the muscles. As the logic follows, more



CAN A "BONER PILL" REALLY HELP MAKE BIGGER AND STRONGER STEROID USERS?

blood flow to the area could increase nutrient and hormone delivery, supporting growth. The nitric oxide pathway is still under much investigation and debate, however. Noting a direct effect on androgen receptors would put the PDE-5 issue under a whole new light.

This study is very interesting, but not compelling, given the methods used. For one, they were in vitro. Directly treating cells with a drug allows near-complete control over your environment. It is an excellent investigatory tool. Unfortunately, the data produced by such experiments is generally just a starting point for future research. Very often, effects noted here are not repeated in human studies. For another, the researchers used osteoblasts (developing bone cells). Similar results would need to be demonstrated on skeletal muscle cells extracted from adult men (before and after using the drug) before we could draw any serious conclusions. For now, I don't recommend anyone start popping PDE-5 inhibitors before hitting the weights. Frankly, think of the horror of a crowded gym if this practice actually became popular! I am certainly going to keep a close eye on this topic to see what develops, though.

References:

1. Aversa A, Fittipaldi S, et al. Tadalafil modulates aromatase activity and androgen receptor expression in a human osteoblastic cell in vitro model. *J Endocrinol Invest* 2015;Jul 2.
2. Spitzer M, Bhasin S, et al. Sildenafil increases serum testosterone levels by a direct action on the testes. *Andrology* 2013;Nov;1(6):913-8. doi: 10.1111/j.2047-2927.2013.00131.x. Epub, 2013 Sep 18. PMID: 24106072

Got a question for William Llewellyn? You can ask him directly on the MD website and have William personally answer your question! Go to www.musculardevelopment.com, MD Forums, MD Staff and Pros, Q and A for William Llewellyn.

William Llewellyn's books (*ANABOLICS*, *UNDERGROUND ANABOLICS* and *SPORT SUPPLEMENT REFERENCE GUIDE*) are now available as e-Books on Amazon, Barnes & Noble and iTunes.

THE RESULTS ARE IN...

X-FACTOR (ARACHIDONIC ACID) WAS CLINICALLY PROVEN TO:

INCREASE

LEAN BODY MASS
MUSCLE THICKNESS
STRENGTH
MUSCLE POWER

True breakthroughs are made very rarely. When they come, they change the face of sports nutrition forever. X-FACTOR (Arachidonic Acid) has done just that!

Put through rigorous clinical investigation at the University of Tampa's prestigious Human Performance Research Lab, weight-training subjects noticed remarkable improvements with X-FACTOR supplementation compared to placebo. After 2 months, they added an average of 21 lbs. to their Bench Press, 89 lbs. on Leg Press, about 4 lbs. of solid lean muscle, and noticed a stunning 5.5 times greater spike in muscle power!

EVERY SINGLE MUSCLE SIZE AND PERFORMANCE VARIABLE TESTED BY THE UNIVERSITY WAS SIGNIFICANTLY IMPROVED WITH X-FACTOR!

MOLECULAR NUTRITION HAS DISCOVERED THE MOST IMPORTANT FATTY ACID FOR MUSCLE SIZE AND STRENGTH, AND UNLEASHED ITS FULL POWER TO THE WORLD!*

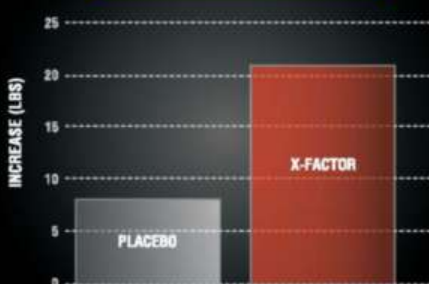
LEAN BODY MASS



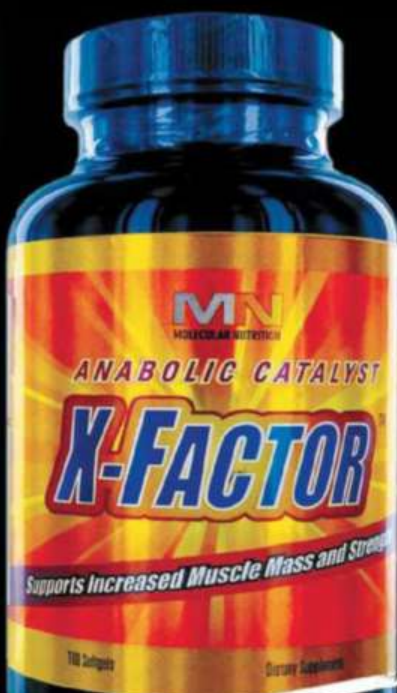
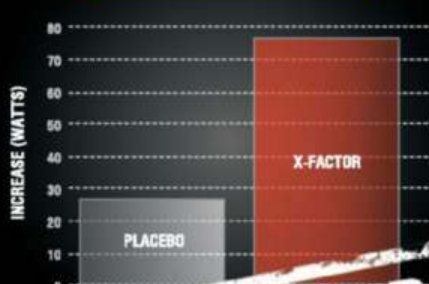
MUSCLE THICKNESS



BENCH PRESS STRENGTH



PEAK MUSCLE POWER



UNIVERSITY TESTED

MN
MOLECULAR NUTRITION
MolecularNutrition.com

U.S. PATENT # 6,841,573. SOLD UNDER LICENSE.
SOURCE: NSCA NATIONAL CONFERENCE. JULY 9-12, 2014.

* THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE.

ANABOLIC RESEARCH *UPDATE*

OK STACKING D-BOL AND WINSTROL?

I want to stack D-bol and Winstrol for my second cycle. I plan to take 50 milligrams of each per day for six weeks— orals only. I hate needles, and am not going to cycle like that. Plus, I've seen two nasty infections already in friends who inject. I'm sticking to pills. Why would it be a bad idea to stack two orals together, though? I heard that was very dangerous and you should never do it. Do you think that's true?

I won't try to change your mind about the orals. If you search the archived articles on musculardevelopment.com, you'll find my position on orals versus injectables, if you want to read it. To answer your specific question, most orals are liver toxic, as you probably know. It isn't necessarily the stacking of two together that is the problem. At least, I've not seen anything to suggest that there is some unusual amplification of toxicity when you do this. That bit of common advice is more about trying to keep your total dose of toxic orals low.

I would begin by saying that your dosage for each is a bit on the high side, at least in my opinion. I know that many underground labs now make 50-milligram methandrostenolone and stanozolol pills. But I believe an optimal dosage for each usually falls in the range of 20-30 mil-

ligrams per day. I don't think most people need 50 milligrams of either, certainly not on a second cycle. And this would be if we were speaking about using one of these drugs alone. Your cumulative dosage of 100 milligrams per day of these orals is pretty extreme. This is why you generally don't see people recommend the stacking of these drugs. The total dosage just gets too high, very quickly.

You might want to rethink your amounts. For example, a stack of 20 milligrams each is still quite formidable. Even that is a tad much for someone relatively new to taking AAS, but it is more reasonable to me. Plus, there would likely be a lot less bloating than with 50 milligrams of methandrostenolone. Not a recommendation, just something to think about. Another option that many people go for is to use Proviron or Primobolan (methenolone acetate) in an orals-only stack, in place of something liver-toxic like stanozolol. Both of these drugs are non-aromatizable as well (don't convert to estrogen), and thus could offer some help with keeping your gains a bit leaner. Admittedly, though, they are a far cry from stanozolol in potency. While the liver may be a very resilient organ, its health is still a very important consideration when cycling. All too often, people push it and end up with jaundice, or something worse. Be careful, and be well.

CHINESE DHT GEL FOR GYNO?

I have a small bit of gyno. It isn't noticeable with my shirt on, but it still bothers me. I actually don't take my shirt off in public because of it, even though I know it isn't really very obvious. It is more of a slight puffiness than actual female breasts. I wanted to know what you think about DHT gel. I have access to a generic version from China. I don't want to have lipo done on them or anything. Does it work?

The use of transdermal dihydrotestosterone for the treatment of gynecomastia actually has some strong clinical support behind it. There have been several published studies on this practice, usually making use of the pharmaceutical preparation Andractim. This is a 2.5 percent dihydrotestosterone transdermal gel that is available in a limited number of countries, mainly in Europe. I presume this is the product you are talking about. Of note, they label Andractim as containing androstanolone. This is just another word for dihydrotestosterone. I presume this is done because of the stigma surrounding dihydrotestosterone, but can't be sure. In any event, the success rate with Andractim and gyno has been quite high, such that it is increasingly being used for this purpose.

How successful has it been? Well, the figures do vary from study to study. Overall, though, it seems that a majority of patients notice at least some visible reduction in the severity of their gynecomastia with treatment. Complete correction

occurs in maybe one out of four patients. Roughly an equal number seem to have no response at all. Those that do have a reduction of their gyno usually notice a response within a couple of months of daily use. There are often side effects reported, but they are typically mild. Such issues as oily skin, acne, secondary hair growth and acceleration of male pattern hair loss are most common, all due to the systemic delivery of DHT.

I can't speak to the legitimacy of a generic DHT gel from China. I suspect this would be an underground product. However, China is a difficult medical market to keep tabs on. It is possibly a legitimate item. Given the general uncertainty with this market, however, I would try to find Andractim if I could. It is fairly readily distributed, and I know of no counterfeits. As with any medication, of course, there are potential risks and benefits to the use of transdermal DHT. The best advice is to discuss the medication with your doctor before making any decisions, and ideally having him or her manage your treatment. ■



HOW IFBB PRO CRAIG RICHARDSON PACKS ON MASS!

Craig Richardson may not look like a hardgainer anymore, but like many of you he has struggled with putting on muscular size over most of his bodybuilding career. After years of fighting to get bigger, thicker and more massive, Craig found the key to overcoming the hardgainer struggle: **Up Your MASS!**

Drinking two **Up Your MASS** shakes each day will help every hardgainer pack in an incredible 1,604 extra muscle building calories, 124 grams of protein, 160 grams of carbs and a massive amount of BCAAs.* The **Up Your MASS** nutritional profile of 45% carbs, 35% protein and 20% healthy fats (such as MCTs, EFAs and CLA) helps provide the perfect metabolic and hormonal environment for maximum mass, superior strength, fast recovery and extreme anabolic growth!



1.888.783.8844 • MHPSTRONG.com



© 2015 Maximum Human Performance, LLC. All rights reserved. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, cure, treat or prevent any disease. Your results may vary. *Based on two daily servings with 16 fl. oz. of whole milk each.



YOU NEED THIS.

**New Extra Strength DARK MATTER
Triggers A Fast & Powerful
Post-Workout Anabolic Reaction!**

New Extra Strength DARK MATTER utilizes the latest research to create the most advanced hyper-anabolic post-workout muscle growth and recovery accelerator. A key component in this new revolutionary formula is its powerful synergistic combination of oligopeptides, insulinotropic amino acids and leucine loaded 10:1:1 BCAA complex. This peptide-amino acid combination is designed to dramatically increase protein synthesis and activate muscle growth. DARK MATTER also contains three highly functional carbohydrates from potato starch, waxy maize and glucose polymers, plus novel insulin optimizers to help maximize insulin spiking and reload your muscles with glycogen. DARK MATTER also boasts a multi-source creatine/glycerol complex for enhanced muscle volumizing and creatine loading into muscle tissue. Nothing will boost recovery and meet all of your post-workout muscle building needs better or faster than Extra Strength DARK MATTER!

Hyper-Anabolic Post-Workout Muscle Growth Accelerator

Utilizing Oligopeptides for Fast Absorption

Fast Impact Insulinotropic Amino Acids

Peptide Bonded Glutamine

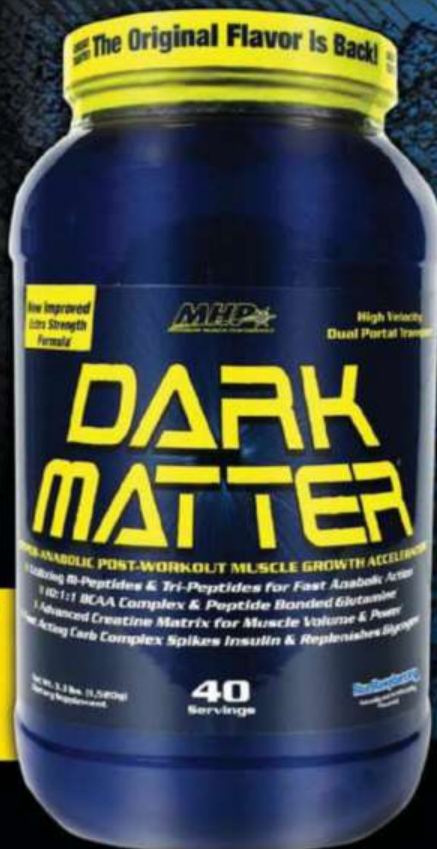
10:1:1 BCAA Complex Triggers Protein Synthesis

Osmotic Carb Complex Spikes Insulin & Replenishes Glycogen

THE ORIGINAL FLAVORS ARE BACK!

You asked for it, so we delivered! Now, new extra potent Dark Matter also has the same great taste and slushy consistency as the original.

Call Or Order Online! 1.888.783.8844 • **MHPSTRONG.com**



AMINO BUILD® NEXT GEN

SCIENTIFICALLY ADVANCED BCAA RE-ENGINEERED FOR PEAK PERFORMANCE

MuscleTech® researchers have re-engineered their most scientifically advanced BCAA formula with even more ingredients athletes want. The new AMINO BUILD® NEXT GEN formula still delivers unmatched muscle- and strength-building, and improved endurance like the original, but it now includes a coconut water and watermelon juice complex and features bold new flavors perfected by the world's top flavor experts.

AMINO BUILD® NEXT GEN is a superior, best-in-class formulation with core ingredients that are supported by four gold-standard clinical studies. Unlike many inferior competitor formulas that have no scientific basis, AMINO BUILD® NEXT GEN is engineered with full clinical doses of potent core ingredients that are scientifically shown to work.

To help athletes pack on lean muscle, AMINO BUILD® NEXT GEN is formulated with 2.5 grams of betaine. In leading university research published in the *Journal of the International Society of Sports Nutrition*, this exact dose of betaine helped strength-training test subjects put on 3.75 pounds of lean muscle in just six weeks— 5.5 times that of the placebo group, which only put on 0.66 pounds. In a separate study, betaine was even shown to enhance muscular endurance.

The formula also features a 4-gram dose of ultra-anabolic leucine. In clinical research published

in the *International Journal of Sports Physiology and Performance*, leucine supplementation helped test subjects increase their 5-rep max strength by over 40 percent.

AMINO BUILD® NEXT GEN is also designed to drive peak performance with a 1-gram clinical dose of taurine. In research published in the scientific journal *Amino Acids*, taurine has been shown to improve performance in endurance athletes when consumed two hours before cardio. In fact, it delivers a noticeable improvement from the first dose.

To really take this time-tested formula to the next level, MuscleTech® researchers added a complex combining coconut water and watermelon juice.

A BCAA formula has never been more complete than this latest evolution from MuscleTech®. AMINO BUILD® NEXT GEN also comes in four bold flavors that have been perfected by the world's top flavor experts: Icy Rocket Freeze, Fruit Punch Splash, Watermelon and White Raspberry.

And for those who want an added kick, there's AMINO BUILD® NEXT GEN ENERGIZED. MuscleTech® researchers enhanced this power-packed formula with naturally sourced caffeine to deliver an instant boost of energy, focus and intensity. And it's available in four mouthwatering flavors: Fruit Punch, Blue Raspberry, Concord Grape and Orange.

Engineered for peak performance,

AMINO BUILD® NEXT GEN and AMINO BUILD® NEXT GEN ENERGIZED deliver two complete formulas tailored to the specific needs of hard-training athletes. With four clinical studies backing their key ingredients, it's a formula that's guaranteed to deliver reliable results. ■

References:

- Balshaw et al. *Amino Acids* 2013;44(2):555-561.
- Cholewa et al. *Journal of the International Society of Sports Nutrition* 2013;10:39.
- Hoffman et al. *Journal of the International Society of Sports Nutrition* 2009;6:7.
- Ispoglou et al. *International Journal of Sports Physiology & Performance* 2011;6(1):38-50.



ENGINEERED FOR PEAK PERFORMANCE, AMINO BUILD® NEXT GEN AND AMINO BUILD® NEXT GEN ENERGIZED DELIVER TWO COMPLETE FORMULAS TAILORED TO THE SPECIFIC NEEDS OF HARD-TRAINING ATHLETES.

HARDCORE THERMO GENIC

NEW **Xenadrine Core™** unleashes a unique, dynamic and powerfully potent ingredient combination that will set a new standard for what a hardcore thermogenic should be. The iconic brand that provides real results is ready to revolutionize the game, again.

“I’ve taken thermo pills before, but have never come across anything this potent.”

– **yova1**, ACTUAL USER REVIEW FROM XENADRINE.COM
Received product as a free sample

THE FUTURE OF THERMOGENICS

Sought-after ingredients **gotu kola**, **perilla seed**, **yohimbe bark** and **forskolin** unleash an exhilarating sensation designed for your most hardcore demands. You’ll feel a surge from the very first serving!

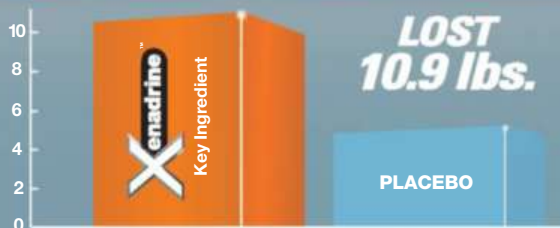
UNRIVALED SENSORY & ENERGY

Feel the supercharged rush coursing through your body after the very first dose. This sensory surging formula is enhanced with caffeine anhydrous to provide unmatched intensity and energy.

POWERFUL WEIGHT LOSS RESULTS

Get ready for real hardcore results. Backed by two scientific studies including one published in the prestigious journal *Phytotherapie*, **Xenadrine Core™** includes a key weight loss ingredient that helped test subjects lose 10.9 lbs. in 60 days with a low-calorie diet.¹

SCIENTIFICALLY RESEARCHED KEY WEIGHT LOSS INGREDIENT



¹Average weight loss with the key ingredient (200mg green coffee) in **Xenadrine Core™** was 10.9 lbs. vs. 5.4 lbs. in a 60-day study with a low-calorie diet, and 3.7 lbs. vs. 1.25 lbs. in a separate 8-week study with a calorie-reduced diet and moderate exercise.

NEW!



GNC
LIVE WELL

theVitamin
Shopper

B MS

Facebook logo is owned by Facebook Inc. Read the entire label and follow directions. © 2015

xenadrine.com/core

DOES GETTING STRONGER MAKE YOU BIGGER?

FOR YOU PERSONALLY, HAS BEING STRONGER ALWAYS EQUATED TO YOUR BEING BIGGER? OR DID YOU FIND THAT OTHER MEANS AND METHODS IN YOUR TRAINING WERE JUST AS IMPORTANT, OR MAYBE EVEN MORE SO, FOR GAINING MASS?

DEXTER JACKSON

Yes, of course, the more weight you push— in good form, that is— the bigger you're going to get. You can't play around with small weights and expect to grow into a big dude. It worked that way for me for many years. I was able to squat in the range of 500-600 pounds and bench press 500 for reps at the height of my strength. But you can't train that heavy forever. Don't misunderstand me— I still use heavy weights. But over the last few years working with Charles Glass as my trainer, I've learned a lot of different ways to work the muscle just as hard by hitting it from different angles and changing up little things like your grip or your foot stance. I base how heavy I will go these days on how I'm feeling. If everything feels good and there are no aches or pains, I will load up some weight. But if my joints are not at 100 percent, I will back off on the weight a bit and look for other ways to work the muscle just as hard.



"The more weight you push— in good form, that is— the bigger you're going to get."
—Dexter Jackson



DENNIS WOLF

In the early years of training, it seems like you get bigger as you get stronger on a very steady basis. When you can go from squatting 100 pounds to 300 pounds, your legs are much bigger. But anyone who has been training for years knows that both types of gains slow down after a while. If they didn't, we would all be as big as the Hulk after 15-20 years of training! I think most of us tend to reach our limit on strength first, and that's probably a good thing. Our joints can only take so much load, again and again, before you get hurt. So that's when you find that paying more attention to squeezing the muscles and really feeling them work can help you keep getting bigger for years after your strength is maxed out. I have still been able to make gains in some areas that I really focused on like my back and my hamstrings, but as far as overall mass, it's never going to be like the old days. I used to gain something like 10 pounds of muscle during an off-season. Now I think more about making my physique look better, not really bigger. Having more detail and quality is the goal for me. I don't think I can get a lot bigger now after all these years, even if I got stronger, and it wouldn't be safe to try.

DALLAS McCARVER

Yes and no. Getting stronger is a great way to measure progress. And when you're dieting, it's a perfect way to tell if you are still holding on to your lean muscle mass and losing only body fat. If your strength is still holding up, that tells you the muscle is still there and functioning. As far as making mass gains, a certain amount of heavy weight is always necessary, and you should be getting progressively stronger over time for a certain amount of years. I have found other methods that are equally effective at stimulating the muscle to grow. My coach Matt Jansen has me doing things like rest-pause sets, slowing down the reps and increasing the time under tension for the target muscle. Just as one example, say you're doing a hack squat or a leg press. You might come down fast and explode up on every rep for a set of 20 reps. Or, you could slow the eccentric part of the rep down to three to five seconds and still explode up, but only go up three-quarters of the way to maintain more tension on your quads. You might not get 20 reps that way, and you might not even be able to use as much weight, period, as you did in the first style. But your quads would be pumped and burning, for sure!



VICTOR MARTINEZ

I was always strong, and for a long time there was a very direct connection between my strength going up and me getting bigger. I even took a couple of years in my early 20s and trained more like a powerlifter than a bodybuilder, because I knew I needed a lot more size to be competitive as a bodybuilder. Those couple of years were how I went from a light heavyweight to a legit heavyweight. But as time went by, I started getting injuries here and there and began to have issues with tendinitis in places like my knees and elbows. Now that I am 42 years old, my joints just aren't what they used to be, even if I had never had the injuries like my pec tear, patellar tendon tear or my broken arm. I have to improvise and find ways to stimulate the muscle just as intensely, but without going as heavy as I used to. My reps are definitely higher now, and I do things like emphasize the negative or use drop sets to make the muscles work harder. All of you reading this who are still really young, healthy and strong—try to appreciate it! It won't be that way forever. That's just how the human body is.



AFTER YOU RETIRE, WILL YOU STAY HUGE?

WHEN YOU RETIRE FROM COMPETITION, WILL YOU MAINTAIN ALL THE SIZE YOU CARRY NOW? IF NOT, WHAT IS A WEIGHT YOU THINK YOU WOULD BE COMFORTABLE AT?



"None of the cool clothes fit you when you're my size. I remember Dorian saying that was one thing he looked forward to after he retired, and I know what he means." —Victor Martinez

DEXTER JACKSON

No, I will not! I've thought about what a nice comfortable weight for me would be, and I really believe I would look and feel just fine at 225. I have been as heavy as 270 this past off-season, and there is no way I would want to walk around at that size and weight heading into my 50s and 60s. It's really not that I'm uncomfortable being that size. The real issue is the fact that I need to eat six or seven times a day to hold that much mass. I've had people, not bodybuilders of course, tell me I have the greatest job in the world because I "get to" eat so much. Oh, really? I tell them try eating eight ounces of chicken breast and two cups of rice seven times a day— every day! See how long that stays fun. They think I'm eating hamburgers and cookies or something. But the way we eat as bodybuilders is really a full-time job, and I do look forward to the day when that part of my life is over and done with for good.

VICTOR MARTINEZ

No way would I want to stay this size after I'm finished competing! You have to eat way too much. If the zombie apocalypse comes, you would starve trying to maintain all that muscle. But seriously, it's a nuisance having to eat every two hours. I am fine with it now, because this is my job and it needs to be done. But once that job is over, I will eat when I'm hungry, just like regular people do. As far as a weight I would like to be, I think something around 220-230 pounds would be good for me. I would still look athletic, and the best part is that I would be able to wear all the brands I used to back in the day, like Diesel and Ralph Lauren. None of the cool clothes fit you when you're my size. I remember Dorian saying that was one thing he looked forward to after he retired, and I know what he means.

DALLAS McCARVER

Once bodybuilding is over for me, there will be no reason to be this large. That being said, I am a taller guy with a big frame. Unless I take up marathon running, I can't ever see myself getting under the 230-250 range. The main thing for me is just to be healthy. If for any reason I wasn't, I would stop doing whatever I was doing that was causing a problem. Even if that meant something so simple as dropping weight, I would do it. Just to be clear, I am very vigilant about my health now, too. I get blood work and EKGs done regularly. My blood pressure, kidney and liver function, and heart are all in good order. It's funny that the question is about losing size after bodybuilding, because as big as some of you guys think I am, I'm pretty much the runt in my own family. Both my mother and father's side of the family have a lot of very big guys. I have cousins who are anywhere from 6'4" to 6'8", and as heavy as 350 pounds! So even if I stopped training, which I wouldn't do, I doubt it would even be possible for me to ever be a small man.

DENNIS WOLF

There would be no reason for me to be as big as I am now if I was all done with competition. It's a lot of work with so much training and eating to maintain this size. But I would always want to be bigger than the average guy. I started bodybuilding because I wanted to look muscular, and I will always like to have that look. Even if I stopped training, which I would never do, I don't think I would ever go back to the size I was before I started bodybuilding. I really have no idea what weight I would be or what I would feel comfortable at, but I guess I will find out one day. Dorian Yates used to be 300 pounds all the time, which is about what I weigh most of the year, or close to it. He is still big and athletic looking, and I think he weighs something like 250 now. Maybe that would be a good weight for me, who knows? One thing I do look forward to once I lose some of my size is getting back into martial arts training for fun. I did kickboxing when I was younger and I enjoyed it very much. In more recent years, I have become a huge fan of the UFC. I not only enjoy watching the fights, but also when they show how the athletes train every day. I live in Las Vegas now, where many of the fighters live and where there are a few really good MMA gyms to train at. I think it would be a really fun way to stay in shape along with weights, once I am able to do that. For now, I am too big and I can't risk any injuries, but after I retire you can bet I will be giving it a try.

ANY FAVORITE EXERCISES YOU STOPPED DOING?

ARE THERE ANY EXERCISES YOU USED TO LOVE TO DO, BUT NOW EITHER CAN'T OR DON'T DO FOR WHAT-EVER REASON?



DENNIS WOLF

There are a few exercises I used to love that I don't do anymore. I talked before about one-arm dumbbell rows. They were part of just about all my back workouts for many years. But I am pretty sure I got my hernia doing them a few years ago. One thing I do know for certain is that every time I have tried to do one-arm rows since my hernia surgery, I can feel a pulling down there that makes me stop every time because it feels like I will hurt myself. Another exercise I stopped doing is shrugs. I used to love those because I could go very heavy, and my traps always got a nice pump. But now they bother my neck to the point where if I am not careful, it can hurt to turn my head for a few days. So I stopped those. Luckily my traps are big enough, and I think they get plenty of indirect stimulation from different back and shoulder exercises, so they maintain their size. The last exercise I had to stop doing was behind-the-neck presses. I relied on those for years as a pressing movement on shoulder day, but eventually they started putting way too much pressure on my joints, and I worried that a shoulder injury was coming soon. Now I do mostly dumbbells for shoulder pressing, and have no problems.

DALLAS McCARVER

I'm still pretty young and haven't been training as long as the other guys here, so for now everything feels OK. I might avoid some exercises because of the potential for injury I might feel they have, but there is nothing that I have had to stop doing as of yet. I don't take it for granted, because I have

spoken with more than a few bodybuilders in their 30s and 40s who tell me they can't do this or that exercise at all anymore, or else they will tell me how strong they used to be when there were my age and their joints were still feeling good. I do plenty of warming up and stretching, and I don't take chances by doing anything stupid in the gym that could haunt me later on. I hope I never have to stop doing certain exercises I love and that give me good results. But talk to me in 10 years, I guess!

VICTOR MARTINEZ

Oh yes, there are a few exercises that were my thing back in the day, that are now just a fond memory. I used to love doing parallel dips, and I was really strong on them, too. I could do good reps with three or even four 45s hanging from a dip belt. Now if I tried that, my rotator cuffs would get torn to shreds. Skull-crushers used to be my favorite triceps exercise, and I got great results from them. I still do them light every once in a while. But they put too much pressure on my elbows now, to the point where if I went really heavy, I would be at risk of tearing a triceps. Finally, heavy squats in the bucket are off my list these days. Even after my knee injury, I was still doing them for a while. I remember hitting a set of 20 with 405 when Oscar Ardon was training me one time. My knees were killing me after that, and it made me realize it was time to say goodbye to the really heavy weights. I still squat, but now I usually don't go heavier than 315. If you focus on the negative and do squats later in the leg workout, that's plenty.

DEXTER JACKSON

There are a few. I used to love heavy barbell squats. I built most of my quad size with them. But if I do them now, they just tear my knees up and they stay sore for close to a week. It's not even worth it. Instead, I use a Smith machine or a squat machine. I still do some other basics like the barbell bench press and barbell rows. For shoulder pressing, I used to love using dumbbells. A few years ago, I had to start going lighter on those because they were giving me pain in the shoulder joints. Then, eventually, even lighter dumbbells were hurting. After that, I switched over to using machines for my shoulder presses, and those don't bother me at all. The good news about both of those exercises I had to quit is that I had already built up all my mass, or close to it, in my quads and shoulders before I had to stop doing squats and dumbbell presses. So now it's not so hard to maintain them with machines. I still work hard and go as heavy as I can, and that's what really matters. ■



A CUT ABOVE WITH 4-TIME MR. OLYMPIA JAY CUTLER



RESULTS MORE IMPORTANT THAN FORM

Jay, I see people using terrible form in the gym and in YouTube videos all the time. I'm sure there are guys who will use stupid amounts of weight and horrible form when you're around, just to try to impress you. Do you leave it alone, or do you ever try and set them straight?

First off, who am I to judge anyone's form? Many have described my form as sloppy. But like I say, it's about stimulating the muscle and doing what you as an individual have to do in order to make that happen. If "textbook" form does that for you, great. If you have to use some swing to feel the muscle fibers firing, then that's OK, too. In the end, all that really matters is what gets results for you. Nobody should be in the gym for the purpose of impressing other people with either how wonderful their form is or how much weight they can lift.

When it comes to other people using bad form, I never say anything. Usually, a person like that is set in his or her ways and isn't looking for a critique. The only thing I will do is that if someone asks me for a spot and they are using a weight they can't do on their own, I tell them to take some weight

off or I won't spot them. The spotter is only supposed to be there for safety or maybe a forced rep, not to help with all the reps so the person can pretend they lifted something they really didn't. I'm not impressed by that, anyway. I'm a bodybuilder, so my training is geared toward improving my physique. I'm not looking to out-lift anyone else or set any records. Honestly, I am so focused on my own training in the gym that I'm not looking around at what anyone else is doing or how they're doing it.

EATING FRESH FRUIT WHILE ON CONTEST DIET

Where do you stand on including fresh fruit as part of a contest diet? I've noticed that you and most other pros eliminate it, but I have heard from others that they keep things like apples and strawberries, the lower glycemic fruits, in their diets all the way to the show. Do you think it really matters in the end whether or not you eat fruit?

I'm not convinced that it makes a difference, but I wouldn't take the chance if I were competing for the Mr. Olympia title and \$250,000. I've eaten fruit as part of my contest diet in the past, but when I worked

with Hany, I didn't include it anymore once the prep began. It really all depends on the individual and their metabolism. Some guys have to eat sweet potatoes and brown rice to get leaner, while others are able to eat white rice and white potatoes and still get shredded. If you really like fruit and you find you are still able to lose just as much fat while eating it, by all means don't worry about whether or not I eat it.

TRAINING WITH LOWER BACK ISSUES

Jay, I've got lower back issues. An MRI showed very slight bulging of a disk. As the doctor stated it is a "three" on a scale of one to 10. Obviously, this is a soft-tissue issue that needs to be resolved to correct the poor tone of my core. What are good "safe" core exercises or back exercises to do, to strengthen the area and alleviate the problem, while waiting for the disk to heal? I know that full range-of-motion sit-ups are bad, and I hesitate to do deadlifts or good mornings, because it cramps up my lower erectors. Any advice would be appreciated, as this is quite a common problem for many bodybuilders.

I had some fairly serious disk issues myself from 2005 all the way through 2008, so

I do know what you're going through and I can tell you what worked well for me. I'm a big believer in strengthening the front, meaning the abs, to help keep the lower back supported. The best exercise I found was hanging leg raises. Crunches have their place, but anything where your legs are hanging will help to decompress the spine, which is what you really want to do in your situation. Gravity boots or an inversion table are also excellent at achieving that, if you can use one or those. If you can find a place near you that does decompression therapy and you can afford the treatments, I highly recommend it. The same goes for deep-tissue massage.

A safe exercise you can do to strengthen and stretch out the lower back is to lie on your back and raise alternate limbs—raise the right arm and left leg at the same time, then switch off to the left arm and right leg, back and forth for reps. Stretch every day, too. Definitely continue to avoid exercises that compress the spine under heavy loads. Heavy barbell squats and any type of heavy shrugs are probably the worst things to do, with your disk issues. Be patient and keep at the exercises and therapies, and eventually you will be feeling much better. ■



"The spotter is only supposed to be there for safety or maybe a forced rep, not to help with all the reps so the person can pretend they lifted something they really didn't."

The Animal Kingdom

WITH 8-TIME MR. OLYMPIA LEE HANEY



'OLD-SCHOOL' TRAINING NEVER GETS OLD!

I'm a very easygoing guy, but this month I am ticked off! I'm simply fed up with the amount of "new-school" training principles and programs being floated around by these so-called gurus today, which they claim to be superior to the "outdated and old-fashioned methods" of past champions like myself, Arnold, Robby Robinson and so on. It baffles me to see athletes who are both mature and at the top of their game hiring these gurus to guide them to success. How stupid, even sickening!

Listen. I am from Whitestone, a tiny spot on the outskirts of Spartanburg, South Carolina that you have never heard of. Well, guess what? In that little town, I became a Teenage Mr. America, an NPC Junior Nationals champion, the first NPC Nationals champion and an IFBB World champion—all without some guru telling me what to do! It's pathetic to me that the athletes today can't write down their workouts, meals and supplements and make their own adjustments to continue making progress. That's just lazy! It blows my mind to hear a champion athlete tell me he just hired a "training coach." Excuse me? You mean to tell me that you've been training for 10, 15 or 20 years, you're a professional competing with the best in the world, and you don't have a pretty good idea yet as to how your body reacts to different exercises and variables yet? Take notes in the gym. Look in the mirror. It's not that difficult.

I learned from the greats who came before me. I would read about how men like Arnold, Frank Zane and Robby Robinson trained, then try it out for myself. Some things worked better than others for me, and I would keep those in my program. There is no need to reinvent the wheel, because if someone comes along with a new design for a square wheel, it won't roll as well as the round one! The "old-school" principles built the greatest physiques of all time. And please don't even try to tell me that the physiques of today are better—there is no contest. The quality and detail were better in previous eras, and all the men could hit a vacuum pose.

One area that I feel has been greatly detrimental to physiques in the modern era has been in training principles. I see a lot of half reps being done with very heavy weights. But even worse, today's athletes work a body part just once every seven days. That means they have to tear it apart with very heavy weights taken to absolute failure, and for high volume. It's no coincidence that we see so many torn pecs, biceps and quads today, as well as many athletes with problem backs, knees, shoulders and elbows. As I always said, "Stimulate, don't annihilate!" I preferred a three-on, one-off system where each body part was trained every four days, or twice in eight days. That gave the muscles a more seasoned look, and they had more endurance from being worked more often. In my day, injuries and tears were practically unheard of. Listen, I was at a Legends conference in San Jose recently with Chris Cormier, Rich

"Those basic, fundamental principles of training and nutrition worked then, and they still work now."

Gaspari, Mike Christian, Shawn Ray and Flex Wheeler. We were all laughing and healthy, and walking just fine. At 55 years old, I have no joint pain at all. I wish I could say that the current champions will be so lucky.

The way the athletes train today is more like powerlifting, and it's no coincidence that the physiques reflect it. They are huge, but often blocky and lacking detail and quality. In days past, we all had small waists and you would see feathering in our pecs, triceps and quads. How often do you see all that now? Beating a muscle up once a week with super heavy weights for half reps will never give you a physique that is both powerful and yet beautiful and inspiring at the same time. People used to look at us in awe and aspire to be us. Now, most people look at a pro bodybuilder with far fewer positive thoughts and attitudes. But it doesn't need to be that way. Look to the "old-school" ways for the answers. Those basic, fundamental principles of training and nutrition worked then, and they still work now. And for the future of our sport, we need to get back to them before it's too late! ■

Would you like to train with eight-time Mr. Olympia Lee Haney? Lee offers both online and personal training for out of town guests. Visit www.leehaney.com for a complete list of services!

Check out videos from the IAFS workshops at <https://www.youtube.com/user/IAFSCertification>. For more information, please visit the website at www.iafscertification.com.

Got a question for Lee Haney? You can ask him directly on the MD website and have Lee personally answer your question! Go to www.musculardevelopment.com, MD Forums, MD Staff and Pros, Q and A for Lee Haney Zone.

UPCOMING EVENTS: OCTOBER 31

Physique and Fitness Games — Atlanta, GA

For more information,
please visit
leehaneygames.com or
Facebook, "Lee Haney's
Physique and Fitness
Games."



Arnold's Corner

WITH 7-TIME MR. OLYMPIA ARNOLD SCHWARZENEGGER

BY RON HARRIS



STEROIDS: **WHAT ARNOLD HAD TO SAY** **ON THE SUBJECT**

And in 2005, the seven-time Mr. Olympia winner told ABC News' George Stephanopoulos that even knowing what he knows now about the performance-enhancing drugs, he would still have used them. "I have no regrets about it," said Schwarzenegger, "because at that time, it was something new that came on the market, and we went to the doctor and did it under doctors' supervision. We were experimenting with it. It was a new thing. So you can't roll the clock back and say, 'Now I would change my mind on this.'"

More examples can be found if one cares to investigate. To Arnold's credit, he didn't skirt the issue in his best-selling *Encyclopedia of Modern Bodybuilding*, published in 1985 by Simon & Schuster, Inc. It's tough to say if the commentary in the final chapter, titled "Anabolic Steroids and Ergogenic Aids" is really that of Arnold, or of Bill Dobbins, who actually wrote the book. I suspect it may be a mix of both men's views on the subject. It is noted that the chapter was written after consulting with Dr. James E. Wright, a noted authority on the subject. Arnold/Bill/James warned near the beginning:

"Whatever long-term problems may be caused by using these drugs, if you misuse them—take too much,

over too long a period or in the wrong combinations—you can expect immediate, serious and possibly fatal results."

This is true, and it isn't. The word "immediate" was misleading, as nobody has ever died right away, even from taking massive quantities of steroids. Damage to the liver and heart takes time, but it is true that you can certainly die if you are reckless and unlucky.

Arnold was clear to point out he was by no means endorsing steroid use. He explained that they were merely the icing on the cake:

"Of all the great bodybuilders I have known and competed against, I don't know of one who used steroids as anything more than a last-minute, finishing touch to an already superb physique."

This is, of course, a huge debate that rages on the Internet constantly, and fairly often on the MD No Bull Forum. Many believe that steroids are essential to creating champions. They also would take great issue with this statement from Arnold in that chapter:

"I also firmly believe that if steroids had never been discovered, the same bodybuilders would have inevitably emerged as the winners. Success in bodybuilding is more dependent on hard work and good genes than on use of any drug."

Arnold goes on in the chapter to express his belief that steroids should only be used once a person has made all the gains possible naturally, and that they should absolutely never be used by teenagers—since their bodies are naturally flooded with testosterone, they would certainly not have maxed on their full natural potential yet, and they would also risk closing their growth plates prematurely and thus preventing growth to what would have been their full adult height. ■

Arnold Schwarzenegger has never denied that he used steroids in his competition days. A quick search on YouTube yields several admissions. In one video, "Arnold Schwarzenegger Admits Steroids Use (1977) Full Interview *EXCLUSIVE*," which appears to have been uploaded from the ESPN Classic network, he says:

"Steroids are taken eight, nine or 10 weeks before a competition. It's not a healthy thing to do, but it's been used."

The interviewer asks, "Did you take them?" To which Arnold, caught slightly off guard, replies: "I take them, I took them, up until the competition. Eight or nine weeks before the competition, and it was something that everybody had to do in order to get an equal chance to compete."

He speaks about it in another video, "Arnold talking about steroid usage.wmv." I believe this was taken from an interview he did in 1990, based on the fact that he references the IFBB drug testing its athletes. This was only done in 1990, with several "positives" and subsequent disqualifications resulting at his own Arnold Classic and that year's Mr. Olympia. He says:

"One of the most common questions I get is, you know, did we take steroids? Because now, of course, drugs is such a big issue in sports. The answer is yes. It was just in the beginning stage, because bodybuilders in those days just experimented with it. But it was not illegal. We talked about it very openly. Anyone that was asked, do you take steroids? Yeah, I take three Dianabol a day, or someone else says I take this, this and that. It was not an illegal thing. Now, after it became a big problem, our federations say bodybuilders ought not to take steroids, and there will be testing done."

"It was something that everybody had to do in order to get an equal chance to compete."



The Blade

WITH 2008 MR. OLYMPIA DEXTER JACKSON



IS FLORIDA OR SOUTHERN CALIFORNIA BETTER FOR BODYBUILDERS?

I am a bodybuilder in upstate New York, not too far from the United States/Canada border. Let me just say that the winters here are truly horrible: cold, windy and tons of snow. I've decided I want to move to either Florida or Southern California. Both have amazing weather. Which one would you say is a better place to be a bodybuilder, as far as things like gyms, supermarkets, restaurants, etc.?

Having spent a lot of time in both places, I would say you can't go wrong either way. Both states have plenty of well-equipped gyms. Southern California does have more organic-type markets and restaurants, because a lot more people there are into healthy living in

general. No gym really compares to Gold's Gym in Venice, California—I have to be honest. It's not like it used to be back when you would see guys like Flex, Chris Cormier, Craig Titus and Tom Prince in there every day, but it's still The Mecca and my favorite gym in the world. There's a magic to the atmosphere that will always be there. Now, if you are looking to compete in an NPC show, I have to tell you that my shows in Jacksonville, Florida are the best. The competitors mean everything to me. I go all out with the staging and have plenty of helpers backstage for you, and everybody gets a huge goodie bag packed with free Versa Grips and all kinds of cool stuff. We start the shows on time, and make sure you don't get out too late. Of course I had to get that plug in, because I mean it!

"A guy with a fast metabolism like me has to train heavy all the time. Once I start doing higher reps, I lose size and fullness pretty fast."

CYCLING YOUR TRAINING NOT FOR EVERYONE

Do you think bodybuilders should cycle their training, so that they go heavy for sets of eight to 10 for a few weeks, and then take a couple of weeks to go lighter—with sets of 12-15, or even higher reps—to give the joints a break? Or do you think it makes more sense to just train fairly heavy all the time, but take a week completely off from training every few months?

That depends on the person. A guy with a fast metabolism like me has to train heavy all the time. Once I start doing higher reps, I lose size and fullness pretty fast. It makes more sense for me to just take time off a couple of times a year, usually right after a competition when my body is really beat up in general and needs a break. I usually schedule a vacation once or twice a year after a show, so I can relax without any training for a good week or more.

LIGHTER WEIGHTS BETTER THAN NO WEIGHTS

You have mentioned that even though you don't have any injuries and never have, you do have some aches and pains. Can you tell me what areas give you trouble? And does that ever affect your training as to which exercises you can and can't do, or how heavy you can go?

The only two areas that really bother me are my elbows and my knees, and that's just from overuse over so many years of heavy training. Most of the time they only hurt a little bit, and it doesn't affect my training at all. I don't go quite as heavy as I used to anyway, since I built plenty of size from 25 years of heavy workouts. But there are times when the pain is excruciating, and I have to try out different machines to see what doesn't hurt as much to use. Typically, I stay away from barbell movements when my elbows or knees are in really rough shape. I will obviously go lighter at those times, too. It bothers me to train light because as I said in a previous answer, I do need heavy resistance to stay big and full. But at the same time, light training is better than no training at all. ■



VISIT DEXTER'S OFFICIAL WEBSITE:

www.dextertheblade.com

Follow Dexter on Twitter: @MrOlympia08 and on Instagram: mrolympia08

For information about the Dexter Jackson Memphis Classic on October 17, visit www.djmemphisclassic.com.

Got a question for Dexter Jackson? You can ask him directly on the MD website and have Dexter personally answer you! Go to www.musculardevelopment.com, MD Forums, MD Staff and Pros, Q and A for Dexter Jackson.

Hardcore Q&A

WITH 8-TIME MR. OLYMPIA RONNIE COLEMAN



TRAINING IN THE HEAT

I think it's crazy that Metroflex Gym, where you trained for all your contests, has no air conditioning even though it often gets up over 100 degrees in your Texas summers. I take my hat off to you for still going hard and heavy all those years in that hellish heat and humidity. I just have to wonder, though, do you think you might have been able to train even heavier and harder under more normal conditions, like 70 degrees instead of 105?

Nope! You have to remember I grew up in Louisiana. My house was about a mile away from the bayou. We had the same heat that Texas has, but the humidity was worse. And lifting weights in the heat isn't so bad—try two-hour football practices all throughout August when it's 100 degrees and 95 percent humidity! For someone who isn't used to those kinds of conditions, I am sure they would have better workouts in an air-conditioned place. Not me.

BACK TO BACK

I'm not sure I would benefit from everything about the way you trained. For instance, I doubt I would be able to make good gains training

every body part twice a week. But I do think you were really onto something with having different back workouts, one for thickness and another for width. How did you start doing that, and do you think all bodybuilders would probably see better results in their back development if they did that?

It all came about because my back workouts were taking so long that I felt they weren't as productive as they could have been. My bread and butter was always deadlifts, bent barbell rows and T-bar rows for thickness. After those, I would do lat pulldowns and seated cable rows. The first few exercises took a lot out of me because as most of you know, I like to go real heavy on deadlifts and rows. After a while I started to think that maybe I could do a better job on the upper back—my width—if I did those movements on a different day. The back is a huge muscle group, just like the legs. A lot of bodybuilders found that they got better results if they did quads and hams at different workouts. I started doing my width and thickness exercises on different days, and my back kept looking wider, thicker and just plain freakier. That told me it was the right choice. So yes, unless your back is already as good as you want it to be, you should give the two different types of workouts a try.

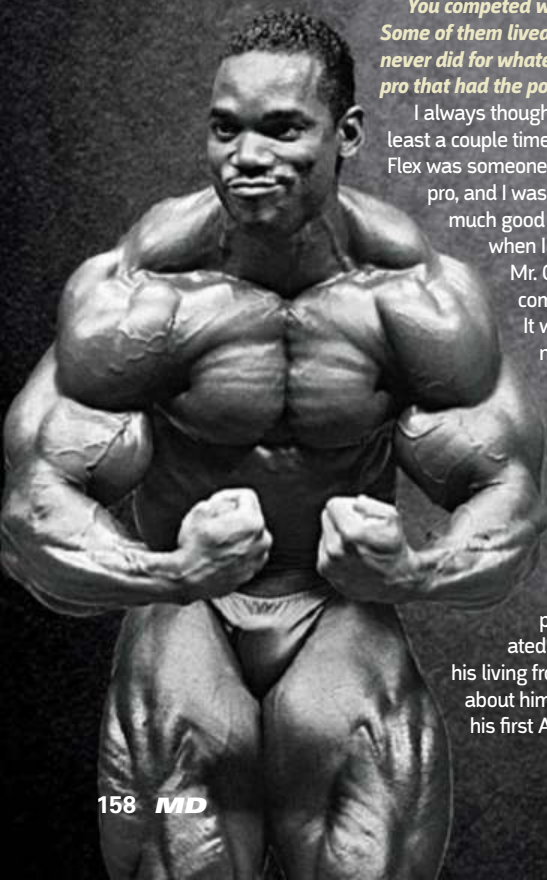
"If you ever ask me who should have gone further than they did in the sport, it's Flex. That man should have been Mr. Olympia, and it still boggles my mind that he never was."

FLEX SHOULD HAVE BEEN MR. OLYMPIA

You competed with a lot of men throughout your pro career. Some of them lived up to their full potential, and others just never did for whatever reason. Does anyone come to mind as a pro that had the potential to do a lot better than he did?

I always thought Flex Wheeler would win the Mr. Olympia at least a couple times. He just has such an incredible physique! Flex was someone I looked up to a lot in my early years as a pro, and I was blessed to become his friend and get so much good advice from him, too. I was totally in shock when I beat him in New York in 1998 for my first Mr. Olympia win. He was real serious about competing and badly wanted to be Mr. Olympia. It was more of a hobby for me, because I never needed it financially. I had my job with the Arlington, TX police department that paid all my bills. I had a house, a couple cars, health insurance and retirement benefits. Of course, I took competing seriously. I trained as hard as I could and I dieted to get in the best shape possible. But being Mr. Olympia wasn't something I ever dreamed would happen. The only thing I ever really wanted to be was an NFL player, and that dream ended once I graduated college and hadn't been drafted. Flex made his living from bodybuilding and people were talking about him becoming Mr. Olympia as soon as he won his first Arnold Classic in 1993. I don't know why Flex

never won a Mr. Olympia title and I went on to win eight of them. But if you ever ask me who should have gone further than they did in the sport, it's Flex. That man should have been Mr. Olympia, and it still boggles my mind that he never was. Did he do everything he could have done to try? Only he knows that for sure. ■



CHECK OUT RONNIE'S WEBSITES

www.ronniecoleman.net, bigroncoleman.com,
Facebook: Ronnie Coleman Signature Series
Instagram: @RonnieColeman8

MEET THE FAMILY



**RONNIE COLEMAN
SIGNATURE SERIES**



**MORE THAN A BODYBUILDER BRAND
MORE THAN JUST SUPPLEMENTS
... A LIFESTYLE!**

Marvin Skipper



MMA Fighter

Cory Calliet



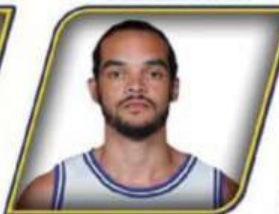
Celebrity Trainer

Ronnie Coleman



Owner / 8x Mr. Olympia

Joakim Noah



Pro Basketball Star

Alex Perris



Pro Athlete Trainer



#LookHowYouWant

**MUSCULAR
DEVELOPMENT**
MUSCULARDEVELOPMENT.COM

RonnieColeman.net



These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease. ©2015 Ronnie Coleman Signature Series®

The Gifted One

BY RON HARRIS

WITH 4-TIME MR.
OLYMPIA PHIL HEATH



PHIL RESPONDS TO ARNOLD



“Who won the show? Dexter did. Dexter Jackson is the epitome of aesthetics. If you don’t like how someone looks, don’t invite them to your show!”

The biggest story of the year in bodybuilding was not related to any contest or exciting new pro. Instead, the drama centered around Arnold Schwarzenegger’s blistering commentary the day after his own Arnold Classic on how big guts are ruining bodybuilding and how the judges, IFBB Chairman Jim Manion in particular, need to take a stand against it and reward more aesthetic physiques with smaller waists. Many fans poured out their support for Arnold’s remarks. A couple of months later, Frank Sepe interviewed the top bodybuilder alive today, four-time Mr. Olympia Phil Heath, and asked him to offer his rebuttal. Many were interested to see how the modern champ would respond to Arnold’s scathing critique of the current state of the sport and its judging. Here is what Heath had to say.

“Jim Manion used to talk about this. The whole 10 years I’ve been a pro, we’ve been talking about this issue. The one thing I have to address to Arnold and everybody else is, who won the show? Dexter did. Dexter Jackson is the epitome of aesthetics. If you don’t like how someone looks, don’t invite them to your show! So maybe next year

it’s smart that if I were doing it, six weeks out, three weeks out, you’re gonna send your invitation again, and you’re gonna send some photos that are gonna go out to a selected group that he (Arnold) selects, and says, if this guy has distension already, I don’t want him at my show, because that’s my product. And I don’t blame him for being upset. But you’re inviting them to your party. It’s not like the Olympia, where you have to earn your way. This is an invitational, so I advise these people who run the show to remind these athletes, hey, you’re not looking right.”

Sepe mentions the fact that both Phil, who has won the Olympia four times now, and Dexter, who has won the Arnold Classic more times now than anyone else, are both known for having aesthetic physiques and small waists.

“What he means is, he doesn’t want the other guys that are placing lower to do that again, because that’s his product, right? So he’s trying to protect the brand, of course. If you were to say Mr. Olympia or the Arnold Classic champ came in like that, that’s a problem. But I mean, come on. I think all the judges at the Arnold Classic got it right; I think they get it right at the Olympia as well. They’re doing their job. They’re marking down the guys who come in—I’m not even gonna name names. Y’all know. The guys that came in with the distension did not place well. So all that stuff doesn’t really apply, so you guys need to stop with all this *who’s aesthetic, who’s not?* Because the guys who are winning already have it. It’s the guys who don’t ... get on their ass, get on their social and say ... hey, man ... you placed seventh, eighth, ninth. I want you to be in the top three. Get your gut right. You’re talking about the top three guys in the world, telling us to get it right. We’re already top three, talk to these guys. They’re the guys trying to come up.”

“So it’s not the top guys. It’s the young dudes. And some of the seasoned vets, who should know better, don’t bring that package. But ultimately, it’s an invitational show. Don’t bring their ass to your party if you don’t want them looking like that. And that’s coming from Mr. Olympia, because I don’t want to see a bad product, either. It affects us all.”

Sepe then asks Phil if he would consider competing in the Arnold Classic himself again, which he hasn’t done since 2010. He became Mr. Olympia for the first time in 2011. Phil points out that he did compete in and win the Arnold Classic Europe shortly after winning his third Olympia title in 2013. Yet no reigning Mr. Olympia since Ronnie Coleman in 2001 has also contested the main Arnold event held in March in Ohio. Phil explains the practical, financial limitations involved. The prize money for winning the Mr. Olympia is nearly twice what the Arnold awards. Yet not only would Heath have to invest just as much time and effort to prepare for it as he does the Mr. Olympia, but the timing of the Columbus event is such that after fulfilling all his extensive travel and appearance obligations after the Olympia, he wouldn’t have any time to rest before having to turn around and start his prep right away for the Arnold. So really, it’s nothing personal against Arnold or his prestigious event, just business. ■

Source: NPC News Online video, “Mr. Olympia Phil Heath on Arnold Schwarzenegger’s Judging Comments.”

Blood & Guts

**WITH 6-TIME MR. OLYMPIA
DORIAN YATES**



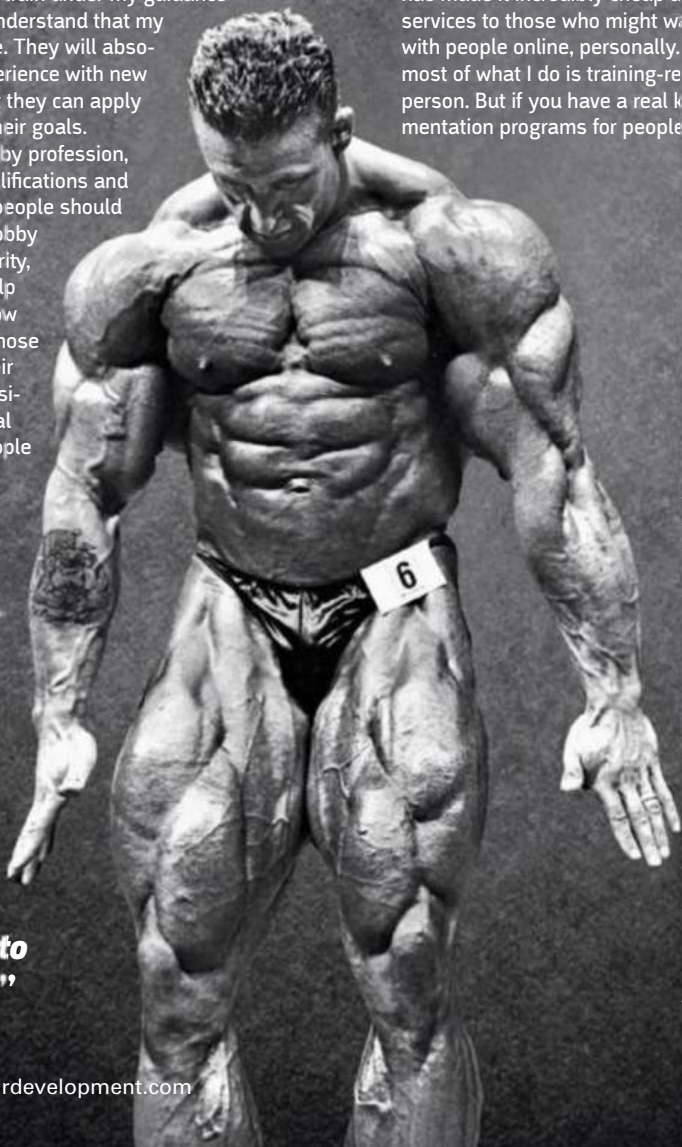
RESPECT PERSONAL TRAINERS AND DON'T EXPECT FREEBIES

I know you are in high demand as a personal trainer, so this probably doesn't happen to you. I am a national-level bodybuilder and a trainer myself. Training and nutritional consultations are how I make a living. Yet I am hit up constantly in person, and much more often on social media, for free advice. Often, guys will tell me they want to come train with me, or they want to "catch a workout" with me if I am in their area, or at the next Arnold or Olympia. I have tried to explain that I am a trainer and they could hire me for a session, but they all get deeply offended that I would even think to charge them. Never mind that I am on a much higher level of knowledge and experience than they are. And I also get people online, expecting me to basically do their contest prep for free. How can I make these people understand that I need to be paid for my services?

You are correct that this doesn't happen to me very often. Having won the Mr. Olympia six times and being that I have people travel from all over the world to train under my guidance at Temple Gym, most people understand that my time and expertise are valuable. They will absolutely come away from the experience with new knowledge and techniques that they can apply from that point on, to achieve their goals.

If you are a personal trainer by profession, with the proper credentials/qualifications and experience to go along with it, people should respect that. This is not your hobby or something you do out of charity, simply because you want to help anyone who wants it. This is how you earn your living—just as those people all earn a living with their own particular job, career or business. Doctors are trained to heal patients. They want to help people stay healthy, or get healthier if they have some type of injury, illness or condition. Yet nobody expects a doctor to give out his or her expert medical advice or

"It's very easy to allow people to take advantage of you if you don't put a value on yourself and the services you provide. You need to stick to your guns."



care for free. You either pay them directly, your insurance company pays them or if you can't afford to pay for medical care, the government pays the doctor for you. It's very easy to allow people to take advantage of you if you don't put a value on yourself and the services you provide. You need to stick to your guns. By all means be polite and professional, but either people want to pay for your services or they don't. Don't worry if they get upset. That's their problem if they expect something for nothing, not yours.

As for people expecting you to do their contest prep for free, that shouldn't be much of an issue. It seems very common now for trainers, coaches and "gurus" to work with clients via emails, text messages, FaceTime, sending progress photos, etc. There are so many people doing contest prep for a fee online now, that there is no reason you shouldn't simply do that yourself if you are getting asked on a regular basis. Again, some people won't want to pay you, and that's fine. Others will. Social media has made it incredibly cheap and easy to advertise yourself and your services to those who might want to hire you. I'm not too keen on working with people online, personally. I prefer the hands-on approach, because most of what I do is training-related and is best experienced live and in person. But if you have a real knack for customized nutrition and supplementation programs for people, you'd be a fool not to look into that.

INTRA-WORKOUT SHAKES: WHAT'S THE DEAL?

What do you think about intra-workout shakes? Do you see a benefit to taking in additional amino acids and simple carbohydrates while you are training?

I do think intra-workout shakes are a good idea, which is why I developed my newest product, DYNAMINO. It contains BCAAs, L-Glutamine and electrolytes. I was one of the first pro bodybuilders to use BCAAs. I used to get them in the early '90s from a company in Australia that was the first to market them as far as I know, and I would take them during my workouts. I've never been a fan of ingesting sugar/simple carbs during your workouts, as they can cause a crash due to insulin spikes. Assuming you have been eating carbs in your last several meals, you should have plenty of muscle glycogen to get through a workout without needing to take in more carbohydrates while you train. ■

For information on DY Nutrition, visit www.dorianyatesnutrition.com. To inquire about Dorian Yates Gym franchises, see dorianyatesgym.com.

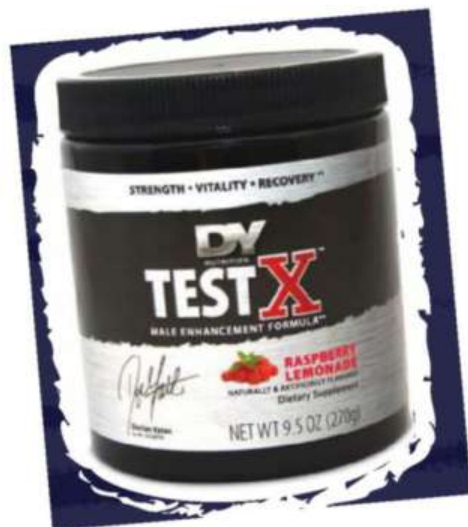
Got a question for Dorian Yates? You can ask him directly on the MD website and have Dorian personally answer your question! Go to www.musculardevelopment.com, MD Forums, No Bull, The DY Zone.

DYN'S POWERFUL ONE-TWO PUNCH!

BOMB FAT!

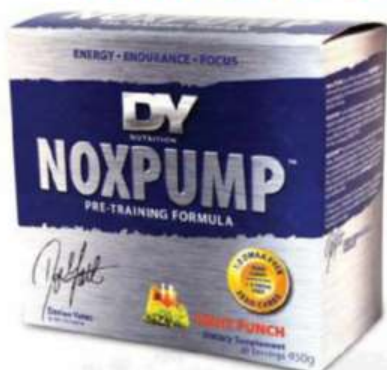


TESTX



DY
DORIAN YATES
NUTRITION

NOXPUMP



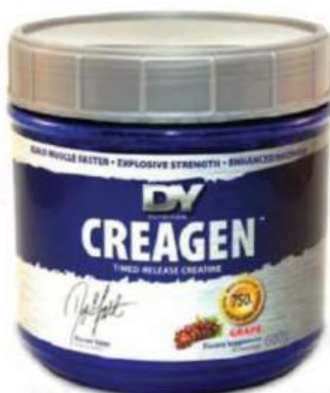
**LEGENDARY
PRE-WORKOUT
BOOST
INSANE
ENERGY
/FOCUS**

DYNAMINO



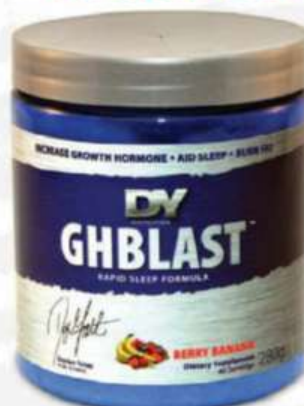
**INTER
TRAIN
BCAA
GLUTAMINE
STACK**

CREAGEN



**ULTIMATE
CREATINE
STACK
UNIQUE
DELIVERY
TECHNOLOGY
750% MORE**

GHBLAST



**SUPER
POWER
SLEEP
AID
/GH
RELEASE**



Distributed By **POWER SHACK®**
www.powershack.com

netrition.com
The Internet's Premier Nutrition Superstore™

A1 Supplements
www.a1supplements.com

For Wholesale Inquires call 877-929-6770 or email usasales@dorianyatesnutrition.com

DorianYatesNutrition.com



VOLCANIC BICEPS PEAK ERUPTIONS WITH INCLINE PRONE DUMBBELL CURLS

Arms that are huge, hard, veiny, ripped and full—yet peaked—have been the holy grail for any bodybuilder worth his high-protein diet since the dawn of our great sport. However, if great arms are one of the (many) keys to success, how does one obtain the mutantly peaked, freaky arms that pull ahead of the other competitors? Of course, it helps to have inherited a great gene structure that inhibits muscle-suppressing proteins like myostatin. Nevertheless, if you have only received average genetics from your parents, then you will have to gear up for gut-bustingly hard workouts if you wish to maximize your God-given potential for great arms. No one can promise you freaky, Mr. Olympia-quality arms with any single exercise, but one thing you can guarantee is that your biceps peak in your upper arm will be stretched to its maximum with prone incline dumbbell curls.

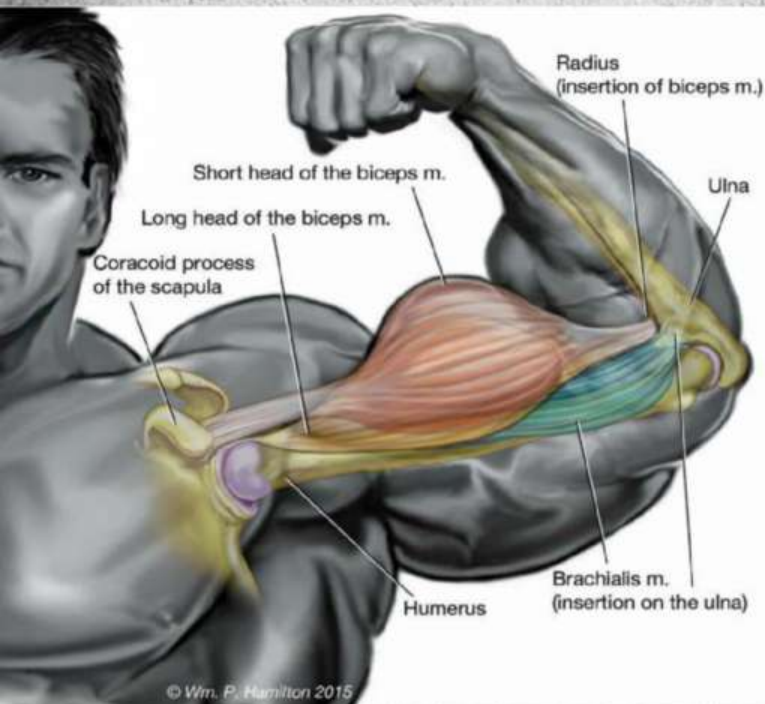
MUSCLES ACTIVATED

The biceps brachialis, and the nerves and blood vessels associated with these muscles, all reside on the anterior (front) side of the humerus bone of the upper arm.¹ The short head of the biceps brachii begins on the anterior part of the scapula (shoulder blade) near the shoulder. It extends down the medial (inner) part of the humerus, and comes together with the long head to form the thick bicipital tendon, which attaches to the radius bone near the elbow.¹ The long head of the biceps begins on the scapula, and it crosses the shoulder joint. It has a very long tendon, and by comparison, the muscle belly is not as long as the short head of the biceps. The belly of the long head of the biceps sits on the lateral part of the arm, and its fibers mesh with the short head as it approaches the elbow.¹ Both heads

are strong flexors of the forearm.^{1,2} However, because the bicipital tendon inserts on the radius bone, which is the most lateral forearm bone, the biceps can help to supinate the hand (turn the palm toward the ceiling) if the forearm begins in a pronated position.

The long head of the biceps assists in shoulder flexion (i.e., bringing the arm forward).¹ However, its elbow flexor function is less effective when the shoulder is flexed.² The short head does not cross the shoulder joint per se, and its elbow flexion function is not reduced with the arm forward (shoulder flexion).

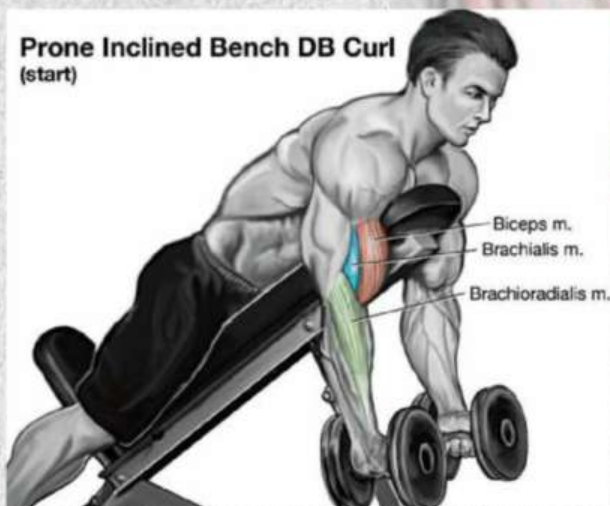
The brachialis muscle lies deep to the biceps brachii. The brachialis arises directly from the distal half of the humerus bone, and it inserts on the coronoid process of the ulna bone on the forearm. Its insertion does not



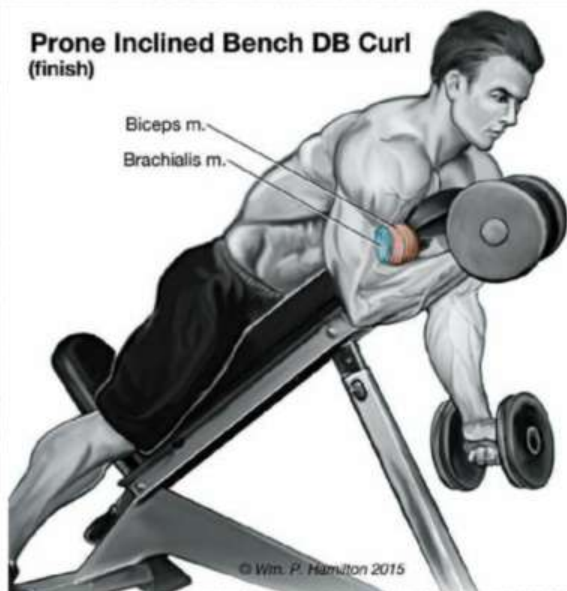
EXERCISE FORM

1. Set up an incline bench at about 60-75 degrees.³ Instead of putting your back on the bench, lie on the bench so that your stomach and chest contact the bench support (prone). Choose a bench that has a short enough back support so that your head and shoulders hang over the top of the bench.
2. Let your arms hang directly down from your shoulder. This should create a line perpendicular to the floor, running from the humerus bone of the upper arm, through the elbow to the forearm.
3. Get a partner to lift a dumbbell into each hand, and grab the dumbbells firmly. Turn your palms so they are facing each other. This places the hands in a semi-pronated position.
4. To do alternate curls, flex the elbow of one arm and begin pulling the dumbbell up your shoulder. As your hand starts to move, begin supinating it so that the palm faces toward the ceiling as you pull the weight up close to your shoulder.
5. At the top, flex the biceps hard and hold this for two seconds before slowly lowering the weight toward the floor. Uncoil the hand, and end in a semi-pronated hand position at the bottom.
6. Alternate to the other arm in the same fashion, by curling the weight up and supinating the hand, then lowering it slowly under control. You could also choose to curl both arms at the same time, instead of alternating between arms.

Prone Incline Bench DB Curl (start)



Prone Incline Bench DB Curl (finish)



allow any supination functions, but it is a very strong elbow (forearm) flexor.^{1,2} This muscle has no functions at the shoulder.

You will not be able to lift a ton on prone incline dumbbell curls, but you should try to pack on as much weight as you can to increase the mass-promoting capabilities, as this will really blow up the short head of the biceps to add to the inner peak in this muscle.

By keeping the upper arm parallel to the floor while on the incline bench, the shoulder is placed in an anterior, flexed position. This shoulder position tends to prevent the long head of the biceps from being maximally stretched, and thereby favors optimal contraction of the inner, short head of the biceps. However, this does not mean that the long head of the biceps will not be active, because it will be strongly contracted, particularly as the hand is supinated. However, in this position, the long head is not as mechanically functional—and will therefore contribute to force production a little less than the short head. The brachialis muscle is strongly activated throughout the exercise.

To emphasize your arms, work them early in your routine.⁴ Keep a tight exercise

form and avoid swinging the dumbbells up, even when you begin to fatigue. The exercise is excellent, but it can inflict a lot of very rewarding pain.⁵ Make sure that you stretch and perhaps massage the biceps after you are done with your set. This will help to reduce the muscle cramping that could occur after a few sets of curls.

All of the winners of the coveted Mr. Olympia title put in their dues, and the champions took years to develop peaked biceps. Thus, unless you were born with freaky genes, you should be prepared to keep at this exercise for at least five months. It will take time—but persistence, proper diet, training and rest will launch you to peaked arm success. ■

References:

1. Moore KL and Dalley AF. Clinically Orientated Anatomy, 4th Edition. Lippincott Williams & Wilkins, PJ Kelly, Editor. Baltimore, Philadelphia. pp. 720-723, 1999.
2. Akagi R, Iwanuma S, et al. In vivo measurements of moment arm lengths of three elbow flexors at rest and during isometric contractions. *J Appl Biomech* 2012;28:63-69.
3. Moon J, Shin I, et al. The Effect of Shoulder Flexion Angles on the Recruitment of Upper-extremity Muscles during Isometric Contraction. *J Phys Ther Sci* 2013;25:1299-1301.
4. Assumpcao CO, Tibana RA, et al. Influence of exercise order on upper body maximum and submaximal strength gains in trained men. *Clin Physiol Funct Imaging* 2013;33:359-363.
5. Soares S, Ferreira-Junior JB, et al. Dissociated time course of muscle damage recovery between single and multiple-joint exercises in highly resistance-trained men. *J Strength Cond Res* 2015. [Epub, ahead of print: <http://www.ncbi.nlm.nih.gov/pubmed/25807025?dopt=Citation>]

SUBSCRIBE NOW!



SAVE 25%

ON A 2-YEAR SUBSCRIPTION!

24 ISSUES for \$59.97
(THAT'S JUST \$29.98 A YEAR!)

Use Coupon Code "MD1015"

HURRY! Offer expires Oct. 31st, 2015

CALL 1-800-653-1151

OR ORDER ONLINE

WWW.MUSCULARDEVELOPMENT.COM

OFFER VALID ON A TWO YEAR SUBSCRIPTION ONLY
OFFER EXCLUDES FOREIGN SUBSCRIPTION RATES
FOREIGN SUBSCRIPTION RATES (INCLUDING CANADA)
ARE \$79.97 FOR ONE YEAR



WHAT BODYBUILDING TAUGHT ME

HOW DID BODYBUILDING MAKE YOU INTO A BETTER LAWYER?

There's no doubt that I'm a better lawyer for having been a competitive bodybuilder. Bodybuilding taught me lessons that fueled the success of my law firm and the many other ventures I've undertaken, and it played a role in my courtroom accomplishments as well. I could write a whole book on what I learned from bodybuilding. But I'm going to focus on a single event, a single night, to tell you how much bodybuilding has meant to the course of my life. It was my very first bodybuilding contest—a college show held at Hofstra University. I was just turning 21 years old. I remember accepting the second-place trophy in a contest I had come to win. What happened both before the show and after are instructive for me in my career today.

IGNORE THE NAYSAYERS. Less than two years before that first contest, I had been the passenger in a one-vehicle car accident that killed two other college students. I suffered serious injuries including a broken neck, back and wrist. Doctors said I would never lift again. They didn't know the power of bodybuilding in your blood. I defied their predictions, and went on to win bodybuilding awards and to lift heavier than ever. Even though I didn't win the show, I walked off with three trophies and the satisfaction

of proving the doctors wrong. In my work as a lawyer today, I ignore negative voices. For example, just last week I was brought on to the legal team of a client facing seven years in prison for charges related to steroid trafficking. His local lawyers had been negotiating for three or four years, and doubted I'd do any better. I hit the prosecutor with a wide range of scientific and legal weaknesses in his case that nobody else had recognized. By the end of the tussling, I walked away with a zero- to six-month sentencing range.

PREPARE TO WIN. Litigation is a gunfight. If you're trying a case before a judge or jury, you better come prepared. That means getting all the little details right. It's all about the preparation, as I learned from bodybuilding competition. I remember how meticulous I was about my diet in the months leading up to that first show. On the night of the show, I squeezed the skin over my abs between my fingers, and it was so thin and dry that it felt like

"I suffered serious injuries including a broken neck, back and wrist. Doctors said I would never lift again. They didn't know the power of bodybuilding in your blood."

cellophane. Not long ago, I had to cross-examine one of the top endocrinologists at the U.S. Food and Drug Administration (FDA) on the medical risks of certain bodybuilding drugs. Without a detailed understanding of the medical literature, some devastating but misleading testimony would have slipped into the record. But I had done all my homework and knew the science better than he did. I won that hearing.

FOLLOW YOUR INSTINCTS. Training for competition develops an instinct for what works for your body. You find what's right for you. If you follow your instincts in life,

you'll often make the choices that work out in the end. I was disappointed at that second placing, and as I was leaving the stage, a protégé of the late IFBB pro Steve Michalik approached me. He said my potential was huge, and offered me a free membership to train at Michalik's legendary gym, "Mr. America's." It was very tempting. But I knew it would mean taking bodybuilding to a different level of commitment and sacrifice. I followed my instincts and declined. Instead, I dedicated myself to law school and ironically, I'm probably far more involved in the bodybuilding world today than if I had taken the other path.

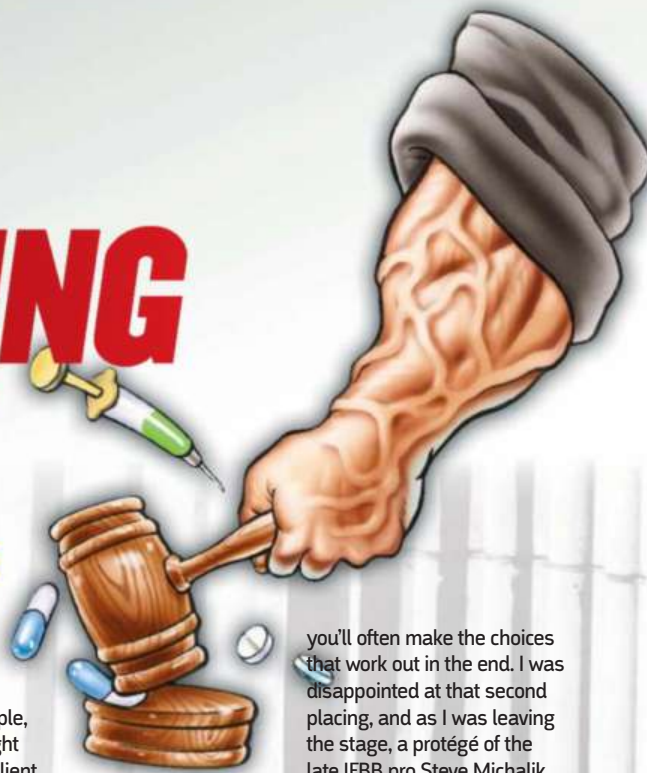
That's my story from that night, but I suspect everyone reading this will agree that the lessons we learn in the gym and on the stage make us better at all the other things we do, and give us an advantage over those who've never tossed around the iron. Be well, my friends.

Rick Collins, JD, CSCS [www.rickcollins.com] is the lawyer that members of the bodybuilding community and nutritional supplement industry turn to when they need legal help or representation. [© Rick Collins, 2015. All rights reserved. For informational purposes only, not to be construed as legal or medical advice.]



Rick Collins ignoring the naysayers:
Waist: 27" Chest: 47"

PHOTO BY: JEFF NOREMAN
NOREMANMEDIA/CREATIONS.COM



FINALLY!

Testosterone Support and Cortisol Control with *DIFFERENT INGREDIENTS!*

Ultimate-T™ (Breakthrough Hormone Support) contains the Emerging Ingredient SpilanTEST™ (Spilanthes Acmella). Ultimate-T also includes Clinically Studied KSM-66® (Withania Somnifera Extract) that is indicated to Support Healthy Testosterone Levels and to Control Cortisol. Ultimate-T should always be combined with proper diet and exercise to experience its full potential. Ultimate-T is intended for use by healthy adults 18 years of age or older. Consult your healthcare provider prior to use.

Ultimate-T™

TESTOSTERONE SUPPORT WITH CORTISOL CONTROL†*

PLUS THE EMERGING INGREDIENT SpilanTEST™



www.USPLabsDirect.com



†These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.

Copyright USP Labs, LLC. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease. Information in this ad should not be used as an indicator or prediction of your individual results. These products are meant to be used in conjunction with a proper nutrition & exercise program. Your results are completely dependent upon the amount of effort you put into it, which includes eating & exercising properly. You should consult your healthcare practitioner before beginning any such plan. All examples are for illustrative purposes only. USP Labs is not affiliated with, and its products are not endorsed by, the United States Pharmacopoeia, Rockville, MD. Endorsers began their relationships with USP Labs as product users before endorsing the company. USP Labs Endorsers may have been remunerated for their endorsement. * Key Ingredient (KSM-66®) Supported by Emerging Research.



TRAINERS OF CHAMPIONS

with The Bodybuilding Wizard
& Master Trainer Charles Glass



HIGH VERSUS LOW REPS

I read in one of the science sections of MD that higher reps were found to be just as effective at stimulating muscle growth as lower reps. Have you found that to be true with yourself and your clients, or is this just another case of a study that may not really apply to the real world?

For one thing, you won't ever see your best quadriceps development without incorporating both high reps and high volume. A quad workout I put one of my bodybuilder clients through might consist of three to four sets of 20 reps on the leg extension with moderate weight, four sets of leg presses going up in weight for sets of 20, 15, 12 and 12, and three supersets on the Smith machine where they do 12 reps of front squats, rack the weight, then get right back under it for 12 reps of back squats. Higher reps can also work well for the upper body, especially in cases where injuries have made heavier training dangerous or simply too painful to be productive. I tend to think higher reps in cases like these are better suited to more experienced trainers who have already built a very solid base of substantial size and strength, rather than beginners. Younger guys newer to training typically grow very well working in the eight- to 10-rep range for upper body, and 10-20 reps for legs.

FASTED TRAINING

It makes sense to do cardio on an empty stomach, because the goal there is to burn stored body fat. But I have also heard people say that you should weight train on an empty

stomach. I believe the reason is so your body secretes more growth hormone? All I know is that the few times I have ever tried to train without having eaten anything, my workouts always sucked and I was weak. Do you feel there is ever any benefit to weight training on an empty stomach, or should we always have at least a small meal or even a shake beforehand?

In my younger years when I was working eight to 10 hours a day in an office setting as an engineer, I split my training up into two daily workouts. I would get in the gym when it opened up at 5:00 a.m. to hit a larger body part, then come back in maybe around 6:00 p.m. to work a smaller one. For a long time, I would do my first workout on an empty stomach. Oddly enough, my workouts weren't bad, but I wasn't growing at all. I was breaking down my body too much without any "gas in the tank." I was also working each body part three times a week in my misguided enthusiasm.

Only when Ken Waller and Pete Grymkowski explained to me that I was sabotaging myself did I make the needed changes. I began waking up a little earlier to eat breakfast before my first workout, and I cut back on how much I was doing. Within four months, I went from 160 to 180 pounds while staying just as lean as ever. I would never recommend weight training on an empty stomach, and a solid meal in your system is better than just a shake. The shake, being in liquid form, digests too quickly and you run out of steam halfway through the workout. If you train early in the morning, a protein shake and a piece of fruit is certainly better than

nothing. But the standard type of breakfast of eggs along with a slow-release type of carbohydrate like oats or grits to provide sustained energy is far better.

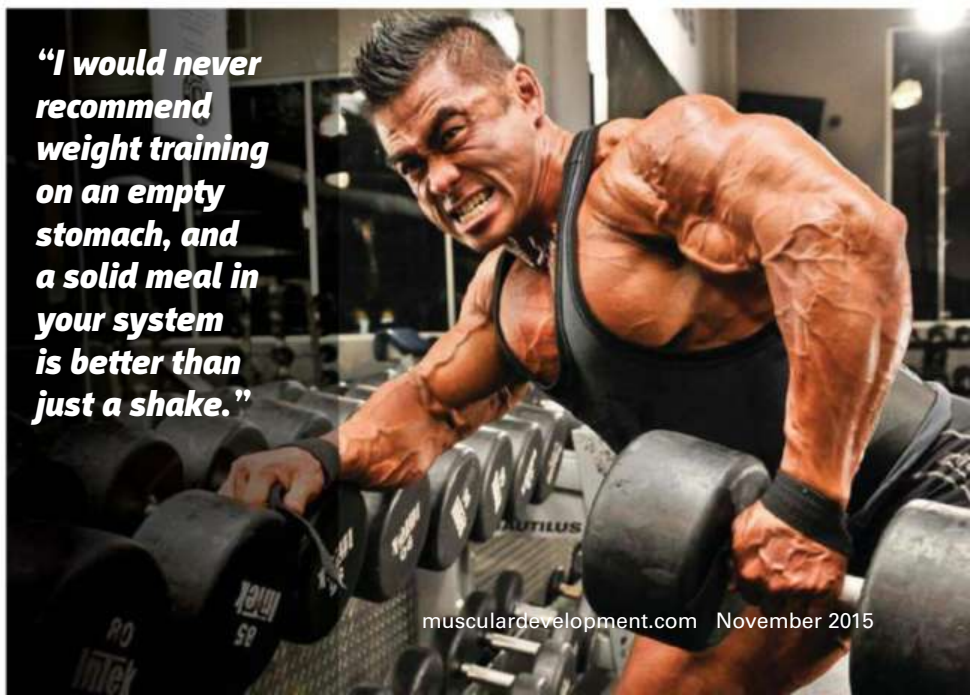
ARE PLANKS A WASTE OF TIME?

I have always wondered if doing "planks" is really a productive way to train the abs. I mean, you're not contracting the abdominals at all—just holding them tensed while you are up on your elbows and toes for a minute. Are planks a waste of time on ab day if all I care about is the development of my abs, and not building more core strength?

Your suspicions are correct. Planks will build core strength, but they are not going to do much, if anything, for the actual development of the abdominals. The two best movements for that purpose in my opinion are crunches and leg raises. With leg raises, I like to have the person bring his or her torso in toward the hips as he or she tucks the legs in by bending the knees. It's like a scissor motion as the body folds and unfolds. Another movement I like is the broomstick twist without any added resistance. The old-school champions used to do anywhere from 20-50 sets for abs. Men like Frank Zane and Zabo would do literally thousands of reps per day for abs. You don't need to go quite that far. Four to five different exercises for three sets of 15-25 reps each, twice a week, should be plenty. ■

Got a question for Charles? Email it to him at editor@musculardevelopment.com and you could see it answered right here in MD!

"I would never recommend weight training on an empty stomach, and a solid meal in your system is better than just a shake."





IT'S ALL ABOUT HARD WORK AND DEDICATION

George, I just got back from the Tampa Pro and couldn't help but notice that both of your Figure and Physique girls rounded up the top spot, taking home first. Congratulations on the fine job with both of these ladies. What I am more impressed with, after talking to one of them, is that she did it drug free. I need to know what kind of magic wand you have back there in New York. Can you please explain how such a thing is possible? Thank you in advance and God bless.

Honestly, I was reading your question over and over and I'm still not understanding it— or maybe I am overthinking it. I really don't get why people are surprised to see a female athlete drug free. Like it is necessary to take gear in order to achieve that look— and we are talking about the feminine look. The question is, why would anyone want to make it any other way? I mean, these women are amazing athletes, and the look the judges are after with regard to females is what they're rewarding today. We aren't talking bodybuilding— we are talking about Figure, Physique and Bikini. I am sometimes shocked to say the least when I hear what some of these girls are taking. It is not good for the sport or their health, period. That is the reason bigger girls aren't getting rewarded anymore. The NPC and the IFBB are trying their best to keep it in perspective, so we don't end up diminishing something we all like to watch— the feminine side of the sport.

Also, I need to remind these competitive women that there is life after their days on the stage are over, and health should be everyone's number one concern. Another great female on my team, who many people can't believe is natural, is the first Miss Physique Olympia, Dana Linn Bailey. I have heard many people talk trash about how much gear she uses, etc. and I am telling you that DLB is 100 percent natural like most females that I work with. Dana has achieved the unachievable with hard work and most importantly, my magic wand ... diet. All you have to do is take a look at my girls in the off-season and you will understand that it's all about hard work and dedication.

"I have heard many people talk trash about how much gear she uses, etc. and I am telling you that DLB is 100 percent natural. Dana has achieved the unachievable with hard work and most importantly, my magic wand ... diet."



KEEP INSULIN IN CHECK FOR CHISELED LOOK AND LONG, HEALTHY LIFE

Hey guru, I am not a competitive bodybuilder but I am looking to achieve that chiseled look. Honestly, I don't know where to start. With so many articles about how to achieve that look, it kind of becomes confusing: high-fat and low-carbs, high-carbs and low-fat, keto, etc. Can you please tell me how to have some type of diet where I won't have to kill myself in order to look good? Thank you, sir.

Good question. You are right that it can become very confusing if you read every day that this new study says this and another study says that. I am going to explain in a very simple way how you can get in shape— and eventually, if you are willing to work harder, get that chiseled look you're after.

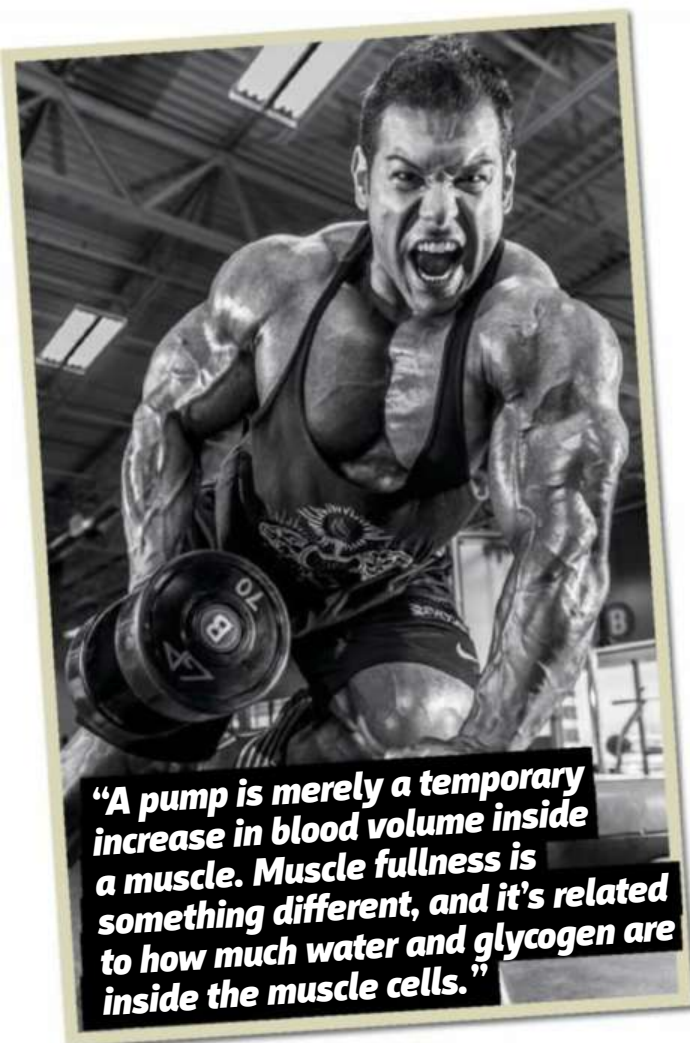
We all need to know and understand the importance of a hormone in our body, otherwise we aren't going to achieve the look that we are after— and most importantly, understand how this whole "getting in shape" thing happens. People tend to make things very complicated— but in reality, instead of reading every study out there, you should start learning how things work. For example, did you know that the most important hormone in our body is insulin? Many people think otherwise, but I will tell you why insulin is very important. If for any reason your insulin isn't in check mode, that's when most problems start— from diabetes to high blood pressure to eventually, heart problems, strokes and even death. So the most important thing to keep in mind, every time you put anything in your mouth, is to think about how it is going to affect your insulin. It's crucial to keep that in mind— and learn what combination of foods will not only help you survive or build your muscles or give you energy— but also what type of mix will keep your insulin in check. By following these easy few steps, you're not just going to get in better shape, but in the long run you are increasing your longevity, adding many years with a healthier lifestyle.

Who wants to die young? No one. So please, every time you reach for a snack or a meal, think about how it is going to affect your insulin. You will be thanking me in the future, because these changes you're going to start making to ensure a proper insulin level will pay off in a big way and in every aspect. So please, stop confusing yourself with the many studies out there and try to simplify your lifestyle by choosing the right food combination, and the rest is easy. Until next time, stay focused and most importantly, never stop working toward your dream body.

George Farah is presenting his opinions and he does not, in any way, shape or form, encourage or condone the use of any illegal or controlled substances.

Nothing contained herein is to be construed as medical advice. Use of any drugs and exercise regimen should only be done under the directions and auspices of a licensed physician. The writer does not claim to be a medical doctor nor does he purport to issue medical advice.

Follow George Farah on Facebook at <https://www.facebook.com/georgefarahdietguru> or on Twitter @gvfarah. For more information, visit www.georgefarah.net.



BREAKING THROUGH A TRAINING PLATEAU

I have a question about putting on mass. I am 19 years old and have been lifting for five years now, and I'm natural. I am 5'10" and have been stuck at 190 pounds for a couple of years, fluctuating from 185 to 195, depending how much I eat and how much cardio I do. Not only have I not gained any weight, but also none of my lifts have gone up in a long time. This is the worst plateau that I have ever hit. I have tried mixing up the number of sets, the number of reps, the exercises, adding more carbs in the morning, adding more protein— even adding cheat foods back in. Nothing seems to work. I have been incorporating the sevens at the end of my workouts and that gives me great pumps, but an hour later, my pump is gone. I feel like I follow a strict diet. For a while, I was getting up to 300 grams of protein a day, and that didn't work. I also feel like I have a good mind-muscle connection, so I don't think that I have an intensity issue. Basically, I have no idea where to go with my training and nutrition, and really could use some advice and direction. I hope I gave you enough information. Thanks for your time.

I was in a very similar situation at your age, so I can relate to your frustration. At the age of 15-16, I was able to handle 225 in the bench press, and fully expected the rapid progression in size and strength I had witnessed in my initial period of training to continue at that same pace. It didn't. For a couple of years I was stuck, then in my late teens I started making gains once again, seemingly out of nowhere. Often, it can simply be a case of muscle maturity and you could be just on the verge of a rapid growth phase. But in the meantime, let's make sure you aren't doing anything to further prolong this plateau.

You mentioned adding more carbs in the morning. It sounds like you may only be eating carbs in the morning, out of the fear that eating them any later will lead to getting fat. Try eating clean complex carbs with every meal and see how that affects you. You may indeed gain unwanted body fat, or this could be what your body needs to start growing. Be sure to stay adequately hydrated at all times, and to consume enough sodium.

As for your pump going away within an hour, that's normal. A pump is merely a temporary increase in blood volume inside a muscle. Muscle fullness is something different, and it's related to how much water and glycogen are inside the muscle cells. Often, when a bodybuilder isn't eating enough carbs, he appears "flat," meaning his muscles are no longer full and round as they should be.

One last contributor to both lackluster pumps and lack of muscle fullness is pre-workout products loaded with caffeine. Most of these products are, because caffeine is a central nervous system stimulant and will make you feel as if you're training harder.

SITE INJECTION: DON'T GO THERE

Is it true that the real reason FST-7 works is because you have the pros injecting all their gear as well as synthol into the muscles, and that's what is really causing the fascia to expand? I've read this posted in several places, and the person always claims they got this secret information directly from one of your top clients.

One downside of the Internet is that oftentimes, people will blindly accept anything they read as fact, regardless of the source or of any type of corroborative evidence. In short, it's easy for anyone to manufacture a rumor and

pass it off as the truth. In this case of me advocating site injection to my athletes, not only is it untrue, but ridiculous.

One quality I strive for in all my bodybuilder clients is maximum definition and detail in the muscles, and injecting oil, be it steroids or some sterile oil specifically designed and sold for site-enhancement purposes, inevitably leads to a loss in definition. Furthermore, repeatedly injecting a muscle will always cause damage, as scar tissue will form at the sites. Over time, large amounts of scar tissue can cause the muscle to take on a lumpy, distorted appearance.

Another hazard with regular injections is

that the scar tissue becomes encapsulated inside the muscle, making the muscle so tight and nonelastic that the risk of muscle tears increases dramatically. Studies seem to point to growth factors released when a muscle is trained in such a way as to elicit a maximum pump, such as FST-7, rather than the actual physical action of the fascia being stretched, as previously theorized. Once again, I do not recommend site injection for my athletes, or any athletes for that matter.

Instagram: hanyrambod

Twitter: hanyrambod

Facebook: Hany Rambod (fan page) ■



WHAT IS THE BEST PRE-WORKOUT?

As a coach, I have often been asked what the best pre-workout is. To me, a pre-workout is not only stimulant based. Most pre-workouts have only one or two “amphetamines,” or very high-stimulant ingredients, and contain a “secret” formula that has a bunch of things in the ingredient list— but not enough of anything to make a difference, except for the “amphetamines” or high-stimulant ingredients. That’s not a pre-workout.

A pre-workout puts emphasis on promoting one’s hyperemia and vasodilation during exercise. Hyperemia is defined as an increase in the quantity of blood flow into body parts, and vasodilation promotes this blood flow by widening blood vessels in the body. United, these two events amplify the muscle pump— now that’s a pre-workout!

SO TO BE CONSIDERED A PRE-WORKOUT, THERE ARE FEW SPECIFIC PATHWAYS THAT THE FORMULA SHOULD TAKE:

- adrenal stimulation (not overstimulation)
- NO2 (vasodilation)
- the brain
- improved strength and endurance

THE ADRENAL PATHWAY would be affected by stimulants like caffeine and higenamine. These will fire up your central nervous system, which will provide the following benefits:

- enhanced focus
- enhanced strength
- enhanced motivation/drive
- enhanced fat burning

One of the most studied and proven supplements to date is caffeine anhydrous. This additive increases the release of some of the “feel good” neurotransmitters and/or chemicals in the brain such as dopamine, epinephrine and noradrenaline. Caffeine allows for longer endurance in the gym, and thus greater fat-loss expenditure.

Higenamine HCL has been studied to show a prompt in lipolysis and energy expenditure. Lipolysis is when the body frees up fat to be used for energy. Higenamine HCL is a stimulant that acts as a thermogenic alone, and more so when combined with other supplementation.

THE NO2 PATHWAY would be impacted by nitric oxide enhancers, which would improve nutrient delivery. Ingredients like citrulline malate and beetroot are commonly used for this pathway. When an adequate dose is consumed, the amino acid citrulline malate can aid in the overall strength and performance of your workouts. Citrulline malate has been proven to be a better vasodilator than arginine. Not only does it endorse greater production of nitric oxide, but citrulline malate also enhances muscle performance where muscle exhaustion is inevitable and/or expected. Beetroot powder serves as a vasodilator, which improves blood flow and circulation during exercise. Blood flow is very important

for the muscle “pump” effect. The more circulation and blood flow a muscle gets, the more you get out of that muscle after the exertion you’ve put it through.

Here are some benefits of the specific goal of enhancing NO2:

- nutrient delivery/faster recovery (via the muscular system)
- improved IGF-1 levels
- sarcoplasm hypertrophy (fluid)/expansion of the muscle tissues

Since fat burning is a combination of the adrenal pathway and the brain, you have to ask yourself what you will do to combat the larger cortisol response from the adrenal central nervous system stimulants. A couple of effective ways to combat excess cortisol would be simply to take a nap after you work out, or take two grams of vitamin C, three to five times a day. If you train later during the day or at night, you may have to back off the stimulants so your sleep will not be disturbed or mess with your circadian rhythm, which will end up slowing down your recovery and excess cortisol output. Focus and drive (motivation) is what you ultimately want from a fat-burning pre-workout.

STRENGTH AND ENDURANCE will be enhanced by beta-alanine, betaine and creatine, which are very

heavy hitters for these specific goals. Beta-alanine will give you noticeable endurance via lactic acid buffering, allowing you to go harder and longer. Betaine and creatine will improve IGF-1 levels, enhance strength and allow your muscles to hold on to more glycogen— which means bigger and stronger muscles, immediately. The most preferred form of betaine is betaine anhydrous. It is found in many food sources, and also follows the breakdown of choline (a micronutrient). When consumed, it is proven to improve muscle mass, energy and endurance during exercise. In other words, it defends the body in times of stress (i.e., exercise). This benefit can be noticed almost immediately. Betaine also helps support a better mood and overall feeling of well-being.

Creatine is a naturally occurring substance in the body. You can also find it in the foods you eat, and in supplement form. Creatine supplementation permits muscle volume and growth, in addition to better muscle performance. It allows for a fuller muscle by forcing water into the muscle cell itself, and not under the skin. This form of creatine is more soluble than other forms, and is also non-bloating.

Conclusion: look at what you buy to make sure it’s what you need to reach your goals. ■

To contact me, please email me at fakpro@aol.com. I’m on Instagram at [instagram.com/fakhrimubarak_ceo_ifbbpro](https://www.instagram.com/fakhrimubarak_ceo_ifbbpro), on Facebook at <http://www.facebook.com/FakhriMubarak> and on Twitter. Have a great month, everyone and as always: “Champions do what competitors don’t!”

MUSCLE THAT KICKS ASS.



Testrol: The Anabolic & Potency Activator

Complete **harder**



TeamGAT.com

888.811.4286

BUY LEGAL STEROIDS

DEKKA



Dekka contains the most popular legal steroid used in America today. Many report loss of body fat, lean mass, no bloating, good strength gains while still considered one of the safest anabolic compounds.

45 PILLS 1 MONTH SUPPLY

ONLY \$60.00
Buy 2 Get 1 FREE
3 Bottles \$120.00

DIANOBOL

DIANOBOL IS GREAT FOR BULKING UP! Made for real world results muscle gain and strength gains. Implementing a purer version can be brought in without compromising the stability.

ONLY \$60.00
Buy 2 Get 1 FREE
3 Bottles \$120.00



100 PILLS 1 MONTH SUPPLY

ALL PRODUCTS LEGAL IN USA FOR PERSONAL USE

COUNTERFEIT PROOF HOLOGRAM

Check or Money Order send to:
ZOE LABS P.O. BOX 616 GREEN, OH 44232

ORDER COD or CREDIT CARD ORDER 24-7 TOLL FREE

USA 1-866-607-2768 OR
1-216-990-3500

Results may vary. These products are not intended to diagnose, treat or prevent any disease. Dianabol does not condone the use of illegal anabolic steroids. Dianabol is a legal supplement not to be confused with discontinued Ciba pharmaceutical drug of similar name. These products do not contain any illegal anabolic steroids.

www.ZOELABS.com

IT'S BACK!



ANDROBOLIC 50 STRONGEST LEGAL ANABOLIC ON THE MARKET



1 Month Supply
ONLY \$59.95

Buy 2 Get 1 Free
3 Months For \$119.90

Limit - 3 bottles per individual per 30 day period

- Drastic increase in muscle growth and strength
- Decreases body fat
- Not a pro-hormone or herbal increaser

This Product is Legal in USA for Personal Use

! READ WARNING PRIOR TO ORDER !

Androstenedione, in ANDROBOLIC 50, was banned by the FDA but has been released back to the market. However, if you are subject to steroid testing, do not use this product. This product is still banned by the International Olympic Committee, World Anti-Doping Agency, National Collegiate Athletic Association, NBA, NFL & MLB.

Sorry, but ANDROBOLIC 50 is illegal to purchase in the states of Missouri & South Dakota, without a prescription.

Mail Orders: Send Money Order to
Optimum Genetics Lab, P.O. Box 622, Harrisburg, IL 62946

www.OGLSPORTS.com

The information in this ad and website have not been evaluated by the FDA. Optimum Genetics Lab does not condone the use of illegal steroids. AndroBolic 50 does not contain illegal steroids.



UPGRADE YOUR ROUTINE AND GAIN THE POWER THREE ADVANTAGE

FatTrack® GOLD PREMIUM

**BODY FAT MANAGEMENT TOOLS
PACKAGED TOGETHER FOR YOUR SUCCESS!**

MEASURE IT • RECORD IT • CHART IT • PICTURE IT



Updated FatTrack® II / MyoTape® / Body Tracker Software

www.accufitness.com or call 800-866-2727

Also Available At:

GNC LiveWell

Howe's

net

USING TESTOSTERONE

IS LIKE

day night



GROWTH HORMONES

WWW.GENERICTESTOSTERONE.COM

TRAIN PAIN-FREE!

NO MORE ACHES & PAINS!

Shoulder Pain
Low Back Pain
Leg & Ankle Pain
Knee Pain
Elbow Pain
Neck Strain
Tendonitis
Aching Joints
Sore Muscles
ALL INJURIES!




PROVEN FAST PAIN RELIEF AND RECOVERY OF INJURED TENDONS, LIGAMENTS, CARTILAGE & MUSCLES!

SINEW THERAPEUTICS

For more info and to order online visit
www.SINEWTERAPEUTICS.com

SEXY LIVE TALK

\$12 Per Call

No Start Up Fees!
No BS!

Just Plenty
of
SEXY Babes!

1-800-615-6869

Visa / MC / Amex 18+



Literotica®

- 25,000+ Sex Stories
- Free Adult Personals
- Free Chat & Forum
- Pics, Movies, Games

Story Categories Include:
Cheating Wives, Taboo, First Time, Lesbian, Fetish, Mature, Sci-Fi, Romance, Interracial, Audio XXX, Gay Men, Illustrated, Group Sex.

www.Literotica.com

Get the REAL DEAL

Also available
Lowest and Properly
ORDER TODAY!

Check and money
orders accepted!

AmeriMedRx
Combining prescription-grade drugs
PRIVATE • SAFE • SECURE • DISCREET

FDA Approved Medications
Overnight Shipping Available
Online/Phone Consultation

Toll Free **1-877-745-5779**
www.amerimedrx.com



MUSCO-MXT®

The Pre-Workout and Recovery Solution!

If you have been plagued by training plateaus and hard gains for months, try Musco-MXT® to get your results back on track.

4 Weeks Training with Musco-MXT®

Average Musco-MXT® Users	Average Musco-MXT® Users
Strength	Non Users
Chest	19.5 lbs 8.9 lbs
Legs	27.7 lbs 25.5 lbs
Overall	135 lbs 99.2 lbs
Fat%	-1.30% 2.84%

Results: The average strength, fat loss and muscle gains of those who used Musco-MXT® increased at over twice the rate of Non-Users.

100% Guaranteed Results!

So don't wait. The time to get past training plateaus is right now. Use Musco-MXT® as directed in conjunction with a sensible nutrition and exercise program. If your not 100% satisfied, just return the unused bottle(s).

Save, Order Now Musco-MXT® one (1) month bottle \$40.00 (reg. \$56.95)
SAVE EVEN MORE... Buy 2 and Get 1 Bottle Free (3 bottles) just \$94.85.

Call 1-800-367-9598 or www.sandcopformance.com



ANABOLICS #1 in Safe-Legal Gear!

MUSCLE LABS USA



www.MuscleLabsUSA.com
24/7 Call 1-727-210-5351

OrderLegalSteroids.com

FREE Shipping!

MUSCLE BUILDERS
WEIGHT GAINERS
FAT BURNERS
ANABOLICS

Muscle Labs Dianabol \$45
Clenbuterol \$50
Anivar \$40
Testosterone-1 \$50
Decabolan \$35
Winsdrol-V \$50

Shop All The Best Brands!
CALL 1-800-441-1284



HARDCORE ANABOLICS

Winstrazol V gives you lean muscular definition, incredible strength and rope-like vascularity. Formulated to increase lean body mass, burn fat and reduce water retention.

D-bolin 25 combines our extremely powerful compounds in explosive combinations to produce ridiculous mass and mind blowing strength gains

EQUI-DROL
Athletes taking Equi-Drol have reported improved vascularity, insane pumps, increased size/strength gains and better endurance.

AD-50 is effective in promoting incredible muscle volume and dramatic strength gains in a short period of time.

Decabolin stacks well with all our products, giving you incredible hardness and strength without bloating and water retention.

24/7 - 888-658-CYBA (2922)

PHARMACEUTICAL GRADE PRODUCTS
FAST/DISCREET WORLD-WIDE SHIPPING
ENGINEERED FOR EXTREME RESULTS
WE SHIP TO ALL MILITARY ADDRESSES
POTENT - SAFE - LEGAL

Special Offer on all Hardcore products!
Visit our website or call for more details.

 **cyba-labs.com**



**ACCUFITNESS
MEASURE UP™**

BODY TRANSFORMATION BY THE NUMBERS™

USE THE RIGHT TOOLS...
SEE THE RESULTS

- Accu-Measure® & FatTrack® Body Fat Calipers
- MyoTape® – Body Tape Measure
- My Workout Trainer (Body Fat & Workout Tracking Software)
- Body Tracker (Body Fat Tracking Software)
- Heart Rate Monitors
- Pedometers

FatTrack® GOLD PREMIUM



For more info visit www.accufitness.com or call 800-866-2727

LIVING LEAN WITH SUPERTEIN!

CHOCOLATE



VANILLA



PEANUT BUTTER



SUPERTEIN® is now available in
3 delicious flavors,
in both 2 Lb. and 5 Lb. sizes!

2 Lbs. / 907 g. 23 servings
5 Lbs. / 2270 g. 56 servings

Supertein is a registered trademark of GAT Inc. GAT is a registered trademark of GAT Inc. The information on this ad may not be available in all countries and is not intended to diagnose, prevent, treat or cure any disease.

Complete harder.
GAT
TeamGAT.com

GAT Supplements

#CompleteHarder
facebook.com/GATSupplements
twitter.com/GATSupplements
TeamGAT.com 888.811.4286

SUBSCRIBE NOW!



SAVE 25%

ON A 2-YEAR SUBSCRIPTION!

24 ISSUES for \$59.97
(THAT'S JUST \$29.98 A YEAR!)

Use Coupon Code "MD1015"

HURRY! Offer expires Oct. 31st, 2015

CALL 1-800-653-1151

OR ORDER ONLINE

**WWW.MUSCULAR
DEVELOPMENT.COM**

OFFER VALID ON A TWO YEAR SUBSCRIPTION ONLY
OFFER EXCLUDES FOREIGN SUBSCRIPTION RATES
FOREIGN SUBSCRIPTION RATES (INCLUDING CANADA)
ARE \$79.97 FOR ONE YEAR



Online pharmacy 24/7

Get your HULK Mass, Cutting and Peptids

www.HULK-GEAR.com

DMD

HIGH ENERGY

EPHED Plus

Mini-White High Energy Pills
Caffeine Dietary Supplement with Vitamin C

200 count for
ONLY \$15

+ Shipping & Handling
dmdpharm.com
800-795-2477



To Someone Who Stutters, It's Easier Done Than Said.

For help, write or call toll-free:

StutteringHelp.org
800-992-9392

THE STUTTERING FOUNDATION®
P.O. Box 11749 • Memphis, TN 38111-0749

STEROID-CLUB.COM

the champions club
world wide discrete shipping
including APO
Pro chemistry cycles
By the pro's

Cutting cycle Advanced Mass cycle



Cutting cycle tabs

TESTOSTERONE TABLETS
NO PRESCRIPTION REQUIRED TO ORDER

REAL TESTOSTERONE
NOT A PRO-HORMONE OR INCREASER

WE SHIP QUICK 3 DAY DELIVERY FROM WITHIN USA NO CUSTOMS



ONLY \$60.00
Buy 2 Get 1 FREE
3 Bottles \$120.00

LEARN ABOUT OUR DISCOUNT REFILL PROGRAM
Used when trying to put on LEAN MASS or LOSE BODY FAT

BUY REAL TESTOSTERONE!
Why buy just a herbal testosterone increaser?

NO SIDE EFFECTS were reported at normal dosages!
Side effects only occurred with abuse.

DOSAGE: 1-2 TABLETS DAILY WITH FOOD

30 day supply **ONLY \$60.00**
or 3 months **ONLY \$120.00!**

ALL PRODUCTS LEGAL IN USA FOR PERSONAL USE

Check or Money Order send to:
Testosterone Rx, 3465 S. Arlington Rd Suite E #157, Akron, OH 44312

ORDER COD or CREDIT CARD - "ORDER 24-7" TOLL FREE
USA 1-866-607-2768 OR 1-216-990-3500

\$19.99 COD CHARGE

www.TESTOSTERONERX.com

HARDCORE ANABOLICS



EQUI-DROL

PHARMACEUTICAL GRADE
NO PRESCRIPTION NECESSARY
120 Capsules
CYBA LABS

24/7 - 888-658-CYBA (2922)

Pharmaceutical grade products
Fast/discreet world-wide shipping
No prescription required to order

cyba-labs.com

IT'S BACK!

OGL SPORTS

ANDROBOLIC 50
STRONGEST LEGAL ANABOLIC ON THE MARKET



1 Month Supply ONLY \$59.95
Buy 2 Get 1 Free
3 Months For \$119.90

Limit - 3 bottles per individual per 30 day period

- Drastic increase in muscle growth and strength
- Decreases body fat
- Not a pro-hormone or herbal increaser

This Product is Legal in USA for Personal Use

! READ WARNING PRIOR TO ORDER !
Androstenedione, in ANDROBOLIC 50, was banned by the FDA but has been released back to the market. However, if you are subject to steroid testing, do not use this product. This product is still banned by the International Olympic Committee, World Anti-Doping Agency, National Collegiate Athletic Association, NBA, NFL & MLB.

Sorry, but ANDROBOLIC 50 is illegal to purchase in the states of Missouri & South Dakota, without a prescription.

Mail Orders: Send Money Order to
Optimum Genetics Lab, P.O. Box 622, Harrisburg, IL 62946

www.OGLSPORTS.com

The information in this ad and website have not been evaluated by the FDA. Optimum Genetics Lab does not condone the use of illegal steroids. AndroBolic 50 does not contain illegal steroids.

Anything Stronger is Illegal™

www.pharmapro.net

PharmaPro.net 1-877-674-8476 CALL NOW!



STERODROL®

1 BOTTLE \$79.95 OR BUY 2 GET 1 FREE \$159.90

There are many reasons why Sterodrol is our #1 seller. At the core of the Sterodrol formula is T. Alatus. The groundbreaking study* on this intriguing herb solidifies the reason why Sterodrol is in such high demand today. Use Sterodrol as part of your training and diet regimen, and you will see why thousands of satisfied customers continue to use it.



MAXSTERONE®

1 BOTTLE \$79.95 OR BUY 2 GET 1 FREE \$159.90

Maxsterone® will enhance your protein synthesis such that its anabolic effects translate to extraordinary Gains in Mass, Strength and Density. You will be amazed at how quickly the product works as some have reported strength increases in just the first few days. By the end of week 2, your Muscles Appear Larger and Fuller and strength is up even more. By the 3rd and 4th week of the cycle, you're lifting more weight than you've ever imagined and Muscle Size and Vascularity are at levels you've never seen before. Side effects such as acne, hair loss, prostate issues are not a worry with Maxsterone. Nothing is More Anabolic!



FUROSTAN™

1 BOTTLE \$79.95 OR BUY 2 GET 1 FREE \$159.90

Furostan is responsible for creating Ripped, Sculpted physiques, like those of today's top pros. It is an excellent cutting agent and is a great choice to use during dieting while maintaining strength and size. Competitive bodybuilders will use it prior to competitions for that dry, shredded look. Athletes focused on getting lean but less interested in bulk will be very pleased with the results on this product. Strength gains are excellent and most will notice an increase in stamina almost immediately. A favorite for those that wish to increase strength and endurance while staying within certain weight parameters. THE PATH TO RIPPED, SHREDDED MASS!



MAXITEST™

1 BOTTLE \$79.95 OR BUY 2 GET 1 FREE \$159.90

Since 2003, Pharmapro has established itself as the leader in gray market formulations you won't find in stores. We specialize in combining unique ingredients at efficacious doses for maximum gains. Our newly formulated MAXITEST™ combines 5 of the most advanced Test boosters available. In recent studies, the ingredients in MAXITEST™ have been found to have a profound effect on testosterone levels. Individuals involved in intense resistance weight training may benefit the most from MAXITEST™ as elevated testosterone levels accelerate muscle protein synthesis which leads to MASSIVE GAINS.



LIPOPRO®

1 BOTTLE \$49.95 OR BUY 2 GET 1 FREE \$99.90

LipoPro™ has a 5 way effect that helps you shed adipose (fat) tissue fast. The formula also has a distinct thermogenic effect that you will experience within 45 minutes of use. You will feel a bit warmer than usual with higher energy levels. LIPOPRO also supports your thyroid gland to allow for maximum thermogenesis and also keeps blood sugar levels stable to prevent food cravings between meals. Retaining water is no longer a problem with LIPOPRO as it contains 2 natural diuretics that help you body from accumulating excess water.



SERMADEX®

1 BOTTLE \$64.95 OR BUY 2 GET 1 FREE \$129.90

SERMAdex is our next generation Anti-estrogen/Test booster. SERM is an acronym and stands for Selective Estrogen Receptor Modulator. SERMAdex uses 3 cutting edge compounds to control estrogen by reducing the estrogen hormone's ability to bind with its corresponding receptor. SERMAdex also boosts Test levels which make it ideal to take at the end of any cycle. The gains you will derive from SERMAdex are dry gains so you can expect excellent vascularity while bloating is not a factor. You can use SERMAdex as a primary supplement for estrogen maintenance and as a powerful test booster. Definitely should be a primary component to your Post cycle regimen.

ANABOLICS

LABORATORY TESTED FOR PURITY AND POTENCY

What Is Pharmapro About?

The Pharmapro Mission is to bring you The Most Powerful Legal Anabolics You Can Buy Anywhere. All formulas are backed by sound scientific research. Every Pharmapro product is manufactured with the finest ingredients and quality assurance is maintained throughout the manufacturing process. Very few companies test their products using the same rigorous protocols as Pharmapro.

Every bottle of Pharmapro products are tested for:

- **Assay** - using HPLC and other advanced methods to assure products meet or exceed label claim.
- **Microorganisms** - to screen for bacteria including salmonella and e.coli as well as yeast and molds.
- **Heavy Metals** - to screen for lead, mercury, cadmium, arsenic and other toxic metals.

What We Are NOT About

No Legal Versions of Illegal Steroids (These just don't exist), No Bogus Chemical Names, No Hiding Our Supplement Facts, No Gimmicky Holograms, No Hype, No BS,.....JUST RESULTS

TO ORDER ONLINE
VISIT PHARMAPRO.NET
OR SCAN HERE



HARDCORE STACK

Mass • Strength • Density • Recovery



Contains Maxsterone, Sterodrol, Furostan, LivR Clear

\$199.95

OR BUY 2 GET 1 FREE \$399.90

RIPPED STACK

Shredded Mass • Vascularity • Definition • Fat Loss



Contains Furostan, Sermadex, LipoPro

\$99.95

OR BUY 2 GET 1 FREE \$199.90

TEST STACK

Max Testosterone • Mass • Strength • Sex Drive



Contains Furostan, Sterodrol, Maxitest

\$154.85

OR BUY 2 GET 1 FREE \$309.70

All Products
Buy 2
Get 1 FREE!

www.pharmapro.net

DIAL TOLL-FREE • 24 HOURS/7 DAYS 1-877-674-8476

Canadian Orders Dial 1-800-241-5087

ARMY • NAVY AIR FORCE • MARINES
We ship to all APO/FPO addresses



FAST SHIPPING

PHARMAPRO RUSH ORDER FORM

FAST SHIPPING

Name: _____ E-mail Address: _____ Phone: _____
Address: _____ City, State, Zip: _____

Product	Units Ordered	Units Free	Total \$
			\$
			\$
			\$
			\$
Sub Total			\$
Shipping			\$
Grand Total			\$

Payment method (check one): ☐ Money Order ☐ Check ☐ Credit Card

CC# _____

Exp: _____

Signature _____

☐ Shipping via Parcel Post (5-7 days) \$9.95

☐ Priority Mail (2-3 Day Service) \$12.95
FREE with any order over \$75.00

Note: Domestic Rates apply for Military orders shipped to APO/FPO addresses.

SEND MAIL ORDERS TO:
PharmaPro Inc.
Dept. 104
1730 S. Federal Hwy., Unit #270
Delray Beach, FL 33483-3309



**MORE
BEAST.**

BEASTSPORTS.COM

*THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE. © 1995 - 2015 Beast Sports Nutrition. All Rights Reserved.



5 ADVANCED FORMS OF CREATINE **CREATURE® CREATINE COMPLEX**

Creature® creatine complex delivers five advanced forms of creatine to fuel muscle growth, increase strength and keep you training like a Beast.*

MADE WITH  Creapure®



NEW IMPROVED & REFORMULATED **BEAST MODE® PRE-WORKOUT**

NEW Beast Mode® has been specially designed to ignite new muscle, maximize focus and intensity — providing the energy to power you through your workout from beginning to the end. Turn on your Beast Mode.**

**BEAST B ORIGINAL.
GENUINE.
MORE.**

MHP
MAXIMUM HUMAN PERFORMANCE

**VICTOR
MARTINEZ**
IFBB PRO

IT'S LIKE
**TESTOSTERONE ON
TESTOSTERONE!**

NEW CLINICALLY TESTED T-BOMB 3XTREME
32% GREATER FREE TESTOSTERONE WITHOUT INCREASING ESTROGEN

**BODYBUILDING'S
PREMIER
TEST BOOSTER**
NOW 20% STRONGER!



GNC
LIVE WELL

V
the Vitamin
Shopper

B
BIO-TECHNICAL

**VITAMIN
WORLD**

DR. V
VITAMIN



Join Team MHP!

facebook.com/TeamMHP
twitter: @MHPStrong
instagram: mhpstrong

1.888.783.8844
MHPSTRONG.com